

# Financial Literacy and Determinants of Personal Insolvency in Portugal

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## Abstract

The objective of this study is to examine the relationship between sociodemographic variables, financial literacy levels and the sum of causes of insolvency (count of causes reported per respondent).

The research adopted a quantitative approach, using a purpose-designed questionnaire based on the 3rd Financial Literacy Survey of the Portuguese Population, conducted by Banco de Portugal in 2020. The sample comprises 84 individuals declared insolvent, of whom 52.4% are women, 40.5% divorced or widowed, and nearly half (47.6%) aged between 40 and 54 years. Data were analysed using SPSS software.

The results reveal that insolvency declarations are more likely among specific sociodemographic groups, such as women, divorced individuals, those with low educational attainment, and those on low incomes. The leading causes of insolvency were unemployment or loss of income (57.1%) and unexpected events (59.5%), followed by

divorce (32.1%) and financial mismanagement (36.9%).

The data indicate that respondents possess a relatively high level of financial knowledge and practice sound financial management, with over 80% reporting systematic control of expenses and timely bill payments, although only about half set long-term savings goals. Additionally, they are heavily influenced by bank counter staff (54.8%) and family members (63.1%) when selecting financial products.

These findings underscore the need for measures to enhance financial literacy, particularly among young people and low-income individuals.

**Keywords:** Insolvency, Insolvency law, Bank credit, Financial Literacy.

**JEL:** D14, A20, G51

## Introduction

The globalisation of the economy and the resulting complexity and diversity of financial products heighten risks in financial decision-making (Oliveira et al., 2022). Consequently, the persuasive marketing tactics employed by brands and credit institutions foster excessive consumerism, exacerbating household budget deficits, a

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situation compounded by widespread financial illiteracy (Oliveira et al., 2022).

Such behaviour drives rising household debt and over-indebtedness, coupled with declining savings, which has negative implications at the individual level (Huston, 2010) and may ultimately lead to insolvency. Excessive consumption, alongside the current economic crisis, has precipitated a surge in family over-indebtedness, resulting in an increase in personal insolvency cases (Oliveira et al., 2022).

Given this trend, it is critical to determine whether financial illiteracy contributes to families' inability to manage everyday expenses and to identify the key sociodemographic characteristics associated with this issue.

Accordingly, this study aims to examine the relationship between sociodemographic variables, financial literacy levels, and the primary causes of insolvency.

The research is: (1) Innovative, as few studies have explored the intersection of these themes; (2) Timely, given the rising number of insolvencies; and (3) Relevant, as it addresses a pervasive societal issue with the potential to drive financial literacy initiatives. Building on the work of Oliveira et al. (2022), which analysed the financial literacy of individuals declared insolvent in 2020, this study extends the analysis to insolvency cases from years preceding and following 2020, providing a broader perspective on the phenomenon.

## 1. Literature review

### 1.1. Causes and consequences of over-indebtedness/insolvency

Studies in the scientific literature indicate that insolvency arises from two primary groups of causes: (1) economic and (2) social (Paškevičius & Jurgaitytė, 2015). Adverse external events - such as job loss (an economic

factor) or health problems, high medical costs, and divorce (social factors) - can reduce incomes or increase living expenses, leading to insolvency (White, 2007). Consequently, many middle-class families face bankruptcy due to socioeconomic circumstances and external shocks rather than excessive or irresponsible spending (Domurath, 2018).

International research highlights that isolated events, including unemployment, illness, marriage, the birth of children, and divorce, are linked to over-indebtedness, with particular emphasis on unemployment (Carvalho & Sampaio, 2019).

Among the causes of insolvency, some studies suggest that they stem from incentives tied to credit card expenditure (Feinberg, 1986), rising levels of compulsive spending across generations (Roberts & Jones, 2001), and gambling (Barron et al., 2002). Additionally, mortgage debt and car financing substantially increase the likelihood of insolvency (Domowitz & Sartain, 1999).

Over-indebtedness may also originate from psychological factors. Economists acknowledge that a lack of self-control leads to reckless behaviour, causing overspending, insufficient savings, and excessive debt (Strotz, 1955). In this context, it is important to note the role of credit industry liberalisation, which fosters a culture conducive to over-indebtedness (Braucher, 2006).

Conversely, certain factors reduce the risk of over-indebtedness and subsequent insolvency. In Portugal, for instance, informal solidarity networks - based on kinship, affinity, or emotional ties - significantly mitigate default risks, as their absence may precipitate financial distress (Frade, 2008). Although Portugal lacks a comprehensive welfare state, the state's shortcomings are partially offset by a society rich in community relations, mutual

## Articles

familiarity, and collective support (Santos, 1992).

Over-indebtedness imposes significant costs on consumers, creditors, and society, contributing to financial and social exclusion (Brennan & Gallagher, 2007) as well as poverty - particularly among low-income households, the elderly, and single-parent families with young children (Betti et al., 2007).

Given the severe economic and social consequences of over-indebtedness - affecting household sustainability and consumer well-being - the rise in credit has become a pressing concern for governments (D'Alessio & Iezzi, 2013).

### 1.2. Sociodemographic characterisation

Regarding sociodemographic characteristics, studies from the United States indicate that single women represent the largest demographic among insolvent individuals (Warren, 2002). Furthermore, bankruptcy applicants typically (1) earn average incomes, (2) are more likely to be divorced, (3) identify as Black, and (4) are less likely to be immigrants (Fisher, 2019).

These findings align with Brazilian research conducted in 2014, which demonstrates that most over-indebted individuals are women earning between one and two national minimum wages, aged 25 to 44, with secondary education qualifications (Carvalho & Sampaio, 2019). Additionally, evidence suggests an inverse relationship between educational attainment and over-indebtedness (Gathergood, 2012).

Concerning household composition, single parents demonstrate greater susceptibility to over-indebtedness (Townley-Jones et al., 2008), while the presence and number of children further exacerbates this likelihood

(Lea et al., 1995). Regarding marital status, Townley-Jones et al. (2008) identified single adults as having a higher probability of over-indebtedness, a finding corroborated by Majamaa et al. (2019), who observed that single and divorced individuals are more prone to over-indebtedness than their married or widowed counterparts. Notably, individuals frequently divorce in the years preceding insolvency before subsequently remarrying (Fisher, 2019). In terms of income levels, most debtors earn the national minimum wage, with pensioners typically receiving even lower incomes (Frade & Jesus, 2020). Research also indicates that incomes tend to decline prior to insolvency before recovering afterwards (Fisher, 2019).

### 1.3. Financial literacy

The concept is defined as the ability to obtain information, analyse, manage, and communicate about personal financial situation (Anderson et al., 2000), aiding in making more assertive, efficient (Potrich et al., 2015), and informed decisions regarding saving, spending, budget management, and choice of financial products (Vieira, 2012), allowing access to better investment opportunities, increasing their return (Jappelli & Padula, 2013).

The concept encompasses the financial knowledge and skills involved in managing the personal finances of the individual's daily life (Damayanti et al., 2018) that affect (1) the ability to manage income and payments, (2) hold the essential knowledge about life and health insurance, (3) have the ability to choose competing offers, and (4) plan for future financial needs (Emmons, 2005). It is, for these reasons, considered a lifelong acquired human capital. (Delavande et al., 2008).

## Articles

Remund (2010) defines the concept of financial literacy as “the effective management of money” and assigns 5 categories:

1. Knowledge of financial concepts;
2. Applicability of these concepts in everyday life;
3. Ability to manage personal finances;
4. Ability to make appropriate financial decisions;
5. Confidence to plan for future needs.

For the authors Lusardi & Mitchell (2014) it's about "people's ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt, and retirement pensions." They conclude that at the root of financial literacy are three concepts: (1) numeracy and ability to calculate interest rates, (2) understanding inflation, and (3) understanding risk diversification.

The authors Schmeiser & Seligman (2013) clarify the distinction between the concept of financial literacy, which concerns the understanding of financial information and the use of this information to make effective decisions, and the concept of financial knowledge, which concerns only the retention of financial facts.

On the other hand, Huston (2010) considers that financial literacy has two dimensions:

1. Understanding - personal financial knowledge or financial education,
2. Application - use of knowledge in the management of personal finances.

To determine an individual's financial capacity, the authors Atkinson & Messy (2012) indicate that three key elements should be considered: (1) behaviour, (2) knowledge, and (3) attitudes.

The behaviour is the result of the person having effective financial knowledge once

they are verified, for example, in the behaviour with the planning of spending and use of the credit card (Atkinson & Messy, 2012). The second element consists of basic knowledge of the main concepts and mathematical ability of people relating to financial situations, such as interest, simple and compound, risk and inflation (Atkinson & Messy, 2012). The third element, attitude, refers to the likelihood that the event will occur because of a financial behaviour that the decision-maker has adopted (Potrich et al., 2015). It consists of the state of mind, i.e. if they have a negative attitude toward saving for the future, they are less likely to carry out such behaviour (Atkinson & Messy, 2012).

According to the authors Grohmann et al. (2015), there are three major agents of financial socialization, being (1) family, (2) school, and (3) work. Regarding the family factor, Pinto (2005) study reports that most individuals learn more about money management from their parents.

Studies have found that financial literacy directly affects loan and savings management outcomes (Huhmann & McQuitty, 2009). Most financial difficulties arise not because of limited income or credit availability, but because of poor financial planning (Omojolaibi & Iwegbu, 2023).

Thus, the lack of financial literacy is one of the factors that increases the risk of insolvency, this is because individuals with poor financial literacy cannot make correct decisions when facing financial problems (Selvanathan et al., 2016). An example of this is the high rates of insolvency among young and recent graduates, largely since they lack financial planning skill (Murthy & Anthony Mariadas, 2017).

The authors Edmiston & Gillett-Fisher (2006) conclude that individuals' financial

## Articles

decisions are positively associated with their high level of financial knowledge, and poor financial decisions are often the result of insufficient financial literacy.

If, on the one hand, individuals with low levels of financial literacy have a higher likelihood of over-indebtedness and are less likely to plan for retirement (Lusardi & Mitchell, 2014), on the other hand, increased financial literacy leads to (1) effective financial planning (Damayanti et al., 2018), (2) increased savings, and (3) a lower level of indebtedness (Sawatzki, 2017).

The study by Graham et al. (2009) confirms that educational background, coupled with other demographic characteristics, makes some investors feel more competent than others in understanding the set of financial information and opportunities available to them. The same study concludes that male investors, with more education, are more likely to believe in their competence to invest than female investors, with less education.

The results of the authors Babiarz & Robb (2014), also regarding the importance of financial literacy, indicate that people with more financial knowledge or more confident in their financial capacity have a significantly higher probability of having savings for possible crisis days.

In Portugal, according to Vieira (2012), a survey conducted by Banco de Portugal in 2010 found that a significant number of respondents do not admit their lack of knowledge and overestimate their financial knowledge, and there is a phenomenon of overconfidence in the context of financial behaviour.

Global financial crises, such as those of 2009, have led researchers to reinforce the importance of consumer protection when it comes to financial decision-making

and behaviour (Hansen, 2017). However, paradoxically, the study developed by the authors (Calcagno & Monticone, 2015), concludes that individuals with poor financial literacy have little tendency to turn to financial counselling, unlike individuals with higher financial literacy who are more likely to turn to these services.

It also notes that financial advisers tend to give more information to those with more knowledge. The authors stress the need to learn about finance to make correct decisions, even in the presence of qualified financial counselling, as service is no substitute for financial literacy.

According to the authors Atkinson et al. (2007), worldwide, only 1 in 3 adults are financially literate. Factors such as age, education, occupation, and income are sociodemographic variables that influence financial management practices such as (1) drawing up budgets, (2) maintaining financial records, (3) using credit, and (4) saving (Titus et al., 1989). That said, an important aspect in the question of financial literacy is to identify how it relates to socioeconomic and demographic variables.

Regarding sex, a study conducted in the United Kingdom shows that men demonstrate a higher level of financial literacy compared to women (Atkinson et al., 2007), which goes against the results of the study of authors (Lusardi & Mitchell, 2011).

In turn, the authors Chen & Volpe (1998) conclude that women have greater difficulties in carrying out financial calculations, as well as a lower level of knowledge, generating difficulties when making responsible financial decisions. On the other hand, the "male gender ... are those who have a greater propensity to belong to the group with a high level of financial literacy" (Potrich et al., 2015),

which may be a result of the socialization of individuals.

A study carried out by the authors Edwards et al. (2007) indicates that parents have different expectations for their children depending on their gender: male or female. As for sons, they have high expectations regarding work and savings, which leads them to have more conversations about money. On the other hand, it was observed that parents raise their daughters to be financially dependent as they are given more financial support. It is also verified that in addition to sex, literacy levels can be related to factors such as education, income, and occupation. The study by authors Klapper & Lusardi (2020) demonstrates that poor adults or those with low educational levels are more likely to have gaps in financial knowledge, which is in line with the study by author Monticone (2010), who finds that low levels of income are associated with low levels of financial literacy.

However, regarding education, the study of the authors Chen & Volpe (1998) finds that university students had an inadequate level of knowledge, especially in relation to investments.

As for occupation, the authors Chen & Volpe (1998) conclude that individuals with more years of service go through more financial experiences and, for this reason, acquire more knowledge, facilitating the analysis of information with a higher degree of complexity and making more informed decisions.

There are other important factors, namely income and age group.

The study by Atkinson & Messy (2012) concludes that low incomes are associated with lower levels of financial literacy.

Regarding the age group, according to the study by the authors Agarwal et al. (2009), the

probability of the population to make financial mistakes follows a U-shaped pattern, being more common in the young and the elderly and less common in adults, which leads to the conclusion that the younger and the older have less financial literacy. This is in line with the study developed by the authors Lusardi & Mitchell (2011), which concludes that respondents between the ages of 25 and 65 tend to answer 5% more questions about financial literacy than those under the age of 25 or over 65.

With regard to the Portuguese case specifically, a study carried out by the Banco de Portugal (2021) indicates that as for young people, 14% of Portuguese young people have low levels of financial literacy, especially those with a history of school retention, immigrants, children of parents with low levels of education and from disadvantaged socio-economic backgrounds, and young people from the Alentejo region and the autonomous regions of the Azores and Madeira.

Among the conclusions of the study, it is noteworthy that about 48% of the respondents stated that they do not make savings, of which 88% reported that income did not allow it and 7% did not consider it a priority to do so. Still regarding savings, only about one-fifth of the respondents saved in a medium or long-term perspective. As for the sources of information, for about 54% of the respondents, the advice given at the counter was the first reason for choosing the products they own (Banco de Portugal, 2021).

A decade later, the 2020 results show that most respondents have (1) adequate household budget planning and savings habits, (2) little tendency to impulse purchases, and (3) behaviours associated with non-compliance.

## Articles

As for the sources of information for decision-making, the advice given to the institution desk and the advice of family or friends remain the most frequent sources to obtain information in decision-making, however, the increase in the use of the Internet stands out.

It should be noted that excessive trust in financial institutions caused many victims, caused by the bankruptcy of two large private banks in the country, Banco Espírito Santo and Banco Internacional do Funchal (Oliveira et al., 2022).

It is therefore concluded that the results show the need to promote habits of comparison of alternatives, before choosing a financial product, and to strengthen financial knowledge. It is also confirmed that the population groups with the lowest level of financial literacy are older people, with lower levels of education and income.

## 2. Methodology

The relationship between the sociodemographic variables, the level of financial literacy, and the sum of causes of insolvency will be investigated.

Thus, the following general objective was defined: to analyse the relationship between sociodemographic variables, the level of financial literacy and the number of causes of insolvency.

Subsequently, three specific objectives were defined:

1. Analyse the relationship between sociodemographic variables and the sum of causes of insolvency.
2. Analyse the relationship between sociodemographic variables and financial literacy.

3. Analyse the relationship between financial literacy and the sum of causes of insolvency.

In this sense, and to give a more consistent response to the objectives, the following hypotheses were defined that were based on the theoretical foundation:

- H 1 - Sociodemographic variables are related to the sum of causes of insolvency.
- H 2 – Sociodemographic variables are related to financial literacy.
- H 3 – Financial literacy is negatively related to the sum of causes of insolvency.

A quantitative methodology was adopted, which presupposes the quantification of data through standardized statistics (Pocinho, 2012). This is an exploratory investigation, given the scarcity of studies on the subject, so the study aims to open avenues for new investigations (Coutinho, 2014).

The data collection instrument used was the questionnaire survey, developed for this purpose, with reference to the 3rd Financial Literacy Survey of the Portuguese Population, conducted by the Bank of Portugal in 2020, since there is no standardized instrument to measure the level of literacy. The instrument is validated for the Portuguese population, and its results are published (Banco de Portugal, 2020).

The chosen data collection instrument allows to obtain primary data and thus, when estimating the distribution of the characteristics of the population, obtain information about the same (Barañano, 2004). It aims to understand, through statistical instruments, (1) the sociodemographic characterization, (2) the level of financial literacy, and (3) the number of causes of insolvency of the respondents.

The questionnaire, available in the appendix, is composed of 21 questions,

most of which are multiple choice, but also open questions and questions in which it is necessary to classify the importance taking into account the Likert scale of 1 to 5 points, in which 1 corresponds to "I totally disagree" and 5 "I totally agree", thus allowing to perceive the interest and opinion of the individuals on the subjects in question (Barañano, 2004).

Within the 21 questions, 7 allows us to trace a sociodemographic profile of the participants, 2 questions are related to the causes of insolvency and 12 related to financial literacy, which are subdivided as follows: 1 question related to attitudes, 5 that allow to collect information about financial behaviours, and 6 that affirm financial knowledge:

In short, the questionnaire consists of 3 parts:

1. Issues related to sociodemographic variables.
2. Issues related to the number of causes of insolvency.
3. Financial literacy issues broken down into 3 subcategories: Attitudes, Behaviours, and Knowledge.

The characterization of the respondents was essential for the present study, as it allowed us to make a comparison with other studies at the international level and identify which sociodemographic factors influence financial literacy and the sum of insolvencies causes in the studied reality. Regarding the issues related to the sum of causes of insolvency, it allows the comparison of the results obtained with the literature and identifying their relationship with the sociodemographic characterization and the level of financial literacy of the respondents. For the purposes of this study, the term "sum of causes of insolvency" refers to the total number of cause categories marked by each respondent in the survey (e.g.,

unemployment, unexpected event, divorce, financial mismanagement, etc.). Each cause marked was considered a point on a scale of 0 to 7, therefore the observed value represents the frequency of causes per individual, not distinct types analyzed separately.

The inclusion of questions relating to financial literacy allows comparison with the financial literacy survey reports of the Portuguese population. It should be noted that to measure the level of financial literacy, the average correct answers to the various questions was averaged.

The survey allowed, therefore, characterizing the sample, to understand the perception of the same regarding the sum of causes of insolvency and to ascertain the level of financial literacy of the individuals declared insolvent, allowing, in this way, to respond to the objectives and problems of the research. Due to the small sample dimension of 84 respondents the results received can be statistically analysed but the generalization has some limitations.

On May 6, 2024, an email was sent containing the link to the survey, elaborated on the Google Forms platform, addressed to individuals declared insolvent and to insolvency Administrators, requesting the latter to distribute the questionnaire to maximize the response rate, and confidentiality was guaranteed.

Data collection took place in the period from May 6, 2024 to July 13, 2024.

Considering the quantitative nature of the data, they were treated using Excel and IBM SPSS Statistics (Statistical Package for Social Sciences), after coding.

To answer the main objective and the research hypotheses, the following statistical tests were performed: the calculation of

Articles

Cronbach's Alpha (ranges from 0 to 1, below 0.60 is considered unacceptable, between 0.60 and 0.70 is considered the lower limit of acceptability, and above 0.70 is considered adequate), descriptive statistics, and association tests between variables through the T-test, ANOVA, Pearson correlation and linear regression. In the association test between variables, the value of the significance level used as a decision criterion in the hypothesis test is 0.05.

**3. Results and discussion**

First, the internal consistency of the dimensions will be analysed. Subsequently, the results of the descriptive statistics will be displayed, and finally, the statistical validation of the hypotheses previously formulated.

**3.1. Analysis of internal consistency**

As presented in the table, Cronbach's Alpha was evaluated.

Some Cronbach's alpha indices obtained are lower than 0.60. This is partly due to the small number of items in certain subscales (alpha

tends to underestimate consistency when there are few questions), the heterogeneous nature of some constructs, and the small sample size (N=84). Furthermore, the instrument used is an adaptation of parts D and G of the Bank of Portugal survey (2020), previously validated nationally. Given the exploratory nature of the study, we retained the subscales with the lowest alpha, but interpreted the results cautiously, supplementing the analysis with item-level statistics and highlighting relevant methodological limitations in the conclusions section.

The Cronbach Alpha of the dimension "Insolvency Process", which integrates the issues related to the year of declaration of insolvency and causes, is not calculated, since these variables will be analysed individually.

The value of Cronbach's Alpha in the dimensions "Attitudes", "Control of expenses and expenses", "Taking a stand against debts", and "Influence in decision making" is above 0.60, which is a good indicator.

In the case of the dimensions "Payment planning" and "Financial knowledge", despite

**Table 1.** Cronbach's Alpha.

	Items	Cronbach's Alpha	
Dimension - Insolvency process	Year of declaration of insolvency		
	Causes of insolvency		
Dimension - Financial Literacy - Financial Attitudes		0.680	Acceptable
Dimension - Financial Literacy - Financial Behaviour	Payment planning	0.494	Not acceptable
	Control of expenses and expenses	0.902	Acceptable
	Taking a stand on debts	0.714	Acceptable
	Product choice		
	Influence on decision-making	0.711	Acceptable
Dimension - Financial literacy - Financial literacy		0.382	Not acceptable

Source: Own Elaboration

having a very low value, they will be used because they are essential for the validation of the hypotheses, except that the results may be affected by low consistency. However, since the data collection instrument is validated and published (Banco de Portugal, 2020), the use of these dimensions is somehow justified. Banco de Portugal (2020) refers that the methodology used to construct the 2020 financial literacy indices follows the ones previously developed in 2010 and 2015, in the 1<sup>st</sup> and 2<sup>nd</sup> Financial Literacy Surveys

of the Portuguese Population. The dimension “Payment planning” corresponds to the D14 part and the dimension “Financial knowledge” corresponds to the G part of the surveys.

### 3.2. Descriptive statistics

#### Part A - Sociodemographic characterization

To characterize the sample, the following demographic and socioeconomic variables were selected: sex, age, education levels, marital status, employment status, and income.

**Table 2.** Sample characterization.

		N	%
Gender	Female	44	52.4%
	Male	40	47.6%
Age	18 to 24 years	0	0.0%
	25 to 39 years	10	11.9%
	40 to 54 years	40	47.6%
	55 or older	34	40.5%
Educational levels	1st and 2nd cycle	9	10.7%
	3rd cycle	11	13.1%
	Secondary education	40	47.6%
	Higher education	24	28.6%
Marital status	Single	23	27.4%
	Union or Married	27	32.1%
	Divorced or Widowed	34	40.5%
Employment situation	Unemployed	6	7.1%
	Employed worker	56	66.7%
	Self-employed worker	7	8.3%
	Retired	13	15.5%
	Other	2	2.4%
Incomes	Up to € 500,00	14	16.7%
	Between € 501 e € 1,000	35	41.7%
	Between € 1,001 e € 1,500	21	25.0%
	More than € 1,501	14	16.7%

Source: Own Elaboration

Thus, a representative profile of the sample in question would be the following: woman, divorced, aged between 40 and 54 years, qualifications at the level of secondary education, employed by another person, and with a salary between € 500 and € 1,000, which is in line with the expected considering the review of the literature.

### Part B - Number of causes of insolvency

Regarding the year of declaration of insolvency, the highest percentage belongs to the years 2014 to 2016 (34.5%), which was predictable given the large volume of insolvency proceedings that entered the courts in those years.

As for the causes of insolvency, most respondents consider unemployment or reduction in income (57.1%) and unexpected events (59.5%). These are followed by the

causes divorce or separation (32.1%), personal financial mismanagement (36.9%), and being a guarantor (33.3%), and health problems (16.7%) and gambling (0,0%) are minor factors. The results agree with the literature regarding unemployment and unexpected events (economic factors), however it was expected that the values referring to divorce (social factors) were higher.

### Part C - Financial literacy

To measure the level of financial literacy, the survey includes questions related to attitudes, behaviours, and financial knowledge.

Financial behaviours included questions on (1) payment planning, (2) spending and expense control, (3) taking a stance on debt, (4) product choice, and (5) influencing choice.

Regarding financial knowledge, five questions were included: (1) the concept

**Table 3.** Year of declaration of insolvency.

		N	%
Year of declaration of insolvency	Previous to 2013	15	17.9%
	2014 and 2016	29	34.5%
	2017 and 2019	16	19.0%
	2020 and 2022	19	22.6%
	2023 to the present date	5	6.0%

Source: Own Elaboration

**Table 4.** Causes of insolvency.

	N	%
Health problems	14	16.7%
Unemployment or reduced income	48	57.1%
Divorce or separation	27	32.1%
Personal financial mismanagement	31	36.9%
Being a guarantor	28	33.3%
Gambling	0	0.0%
Unexpected events	50	59.5%

Source: Own Elaboration

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of compound interest, (2) inflation, (3) risk diversification, (4) numeracy, (5) interest rate effect, and (6) simple interest calculation. In all the analysis, the following statistics are presented: Mean (M), Standard Deviation (SD), Minimum (Min), and Maximum (Max).

### C.1. Financial attitudes

As for financial attitude, respondents disagreed with statements such as "It gives me more pleasure to spend money than to save for the future" (81.6%), "Money exists to be spent" (52.8%), and "I live for the present and don't worry about the future" (78.1%). Thus, a large proportion of respondents avoid impulsive purchases out of self-control.

### C.2. Financial behaviour

#### Payment planning

When it comes to payment planning, 81.0% make a plan to manage their income

and expenses, 75% make a note of their expenses, 63.1% set aside money to pay for day-to-day expenses, 89.3% make a note of the bills they have to pay so they don't forget, 59.5% have automatic payments for regular expenses, and 51.2% don't use the bank's app to control expenses.

So, most of the respondents have good habits regarding payment planning, presenting values higher than in the 3rd financial literacy survey, where only 40% take note of their expenses and 31.2% set aside money to pay day-to-day bills.

#### Control of expenses

When it comes to controlling spending and expenses, 75.8% agree with the statement "I personally and systematically control my personal finances," however only 51.7% agree with the statement that "I set long-term savings goals and do everything to meet them."

**Table 5.** Financial attitudes.

N=84	Min	Max	M	SD
I take more pleasure in spending money than saving for the future	1	5	4.18	0.907
Money exists to be spent	2	5	3.49	0.951
I live for the present and I don't worry about the future	2	5	4.14	0.907

The values indicated relate to the scale of measurement: 1 – Totally agree, 2 – Agree; 3 – Neither agree nor disagree, 4 – Disagree, 5 – Totally disagree.

Source: Own Elaboration

**Table 6.** Payment planning.

	N	%
Make a plan to manage your income and expenses	68	81.0%
Take note of your expenses	63	75.0%
Separates money to pay bills from money to pay day-to-day expenses	53	63.1%
Make a note of the bills you have to pay so you don't forget	75	89.3%
Uses the bank's app or a personal finance management tool to control expenses	41	48.8%
Has automatic payments for regular expenses	50	59.5%

Source: Own Elaboration

**Articles**

Finally, 83.90% agree with the statement "I pay my bills on time" and 80.4% agree with the statement 'before I buy anything, I wonder if I can afford that expense'.

Thus, most of the respondents have savings goals, can pay the bills on time and consider whether they can afford the expense, presenting values similar to the results of the 3rd survey on financial literacy (89.1% agree with the statement "I pay my bills on time" and 84.1% agree with the assertion "before buying anything I weigh carefully if I can bear that

cost"). It is important to note that, according to the study, Portugal scores above the OECD average in terms of money control and expenditure weighting.

**Taking a stand on debt**

Thus, and according to the table presented, in a debt situation, most of the respondents reduce expenses (92.9%), use the money from savings (50.0%), and work longer to earn more money (47.6%). Compared to the third financial literacy survey (48.2% of respondents

**Table 7.** Control of expenses

N=84	Min	Max	M	SD
I personally and systematically control my personal finances	1	5	3.89	1.064
I set long-term savings goals and do everything I can to meet them	1	5	3.44	1.155
I pay my bills on time	1	5	4.15	1.058
Before I buy anything, I consider carefully if I can bear this expense	1	5	4.05	1.118

Source: Own Elaboration

**Table 8.** Taking a stand on debt.

	N	%
I used money from my savings	42	50.0%
Reduced expenses	78	92.9%
I sold an asset I had	27	32.1%
I worked longer to make more Money	40	47.6%
I asked for financial support from the state	10	11.9%
I asked friends and/or family for help	28	33.3%
Borrowed from family or friends	34	40.5%
I asked my employer (Ex: loan, advance salary ...)	8	9.5%
Pawned goods	8	9.5%
I used credit from my account/line of credit I already had	14	16.7%
I used the credit card to pay regular expenses or withdraw money	16	19.0%
Take out a new loan from a financial institution	14	16.7%
I made a loan from another entity (informal)	7	8.3%
I got an overdraft on the account more than the authorized	7	8.3%
I paid my bills late / I didn't pay my bills	27	32.1%

Source: Own Elaboration

## Articles

reported reducing expenses, 28.6% reported using money from savings and borrowing from friends or family), the figures are higher.

### Product choice

Regarding the question of product choice, 26.2% admitted that they did not research and did not consider any other option, and 7.1% searched but did not find any option. Of the respondents who considered multiple options, 10.7% considered options from the same institution and 56.0% considered options from different institutions.

According to the results, most of the respondents, when choosing a product, consider several options from several institutions, which concurs with the results presented in the 3rd survey on financial literacy (69.4% of the respondents considered

other alternatives in the same institution or from different institutions).

### Influence on the choice of products

Regarding the question of influence on the choice of product, respondents consider themselves influenced by advice on the counter (54.8%), advice from family members (63.1%), and by their own experiences in previous acquisitions (60.7%). On the other hand, they do not consider themselves influenced by the advice of specialized entities (56%), recommendations in specialized newspapers and magazines (67.7%), and information collected at the counter (58.3%). As for information on the Internet, opinions are divided, advertising on TV does not influence (71.4%).

**Table 9.** Product choice.

		N	%
Which of the following statements best describes how you chose the most recently financial product?	I did not research and did not consider any other options.	22	26.2%
	I searched but didn't find any option to consider	6	7.1%
	I considered several options from the same institution	9	10.7%
	I considered several options from different institutions before making my decision	47	56.0%

**Source:** Own Elaboration

**Table 10.** Influence on the choice of product.

	N	%
Advice at the counter of the institution where you purchased the product	46	54.8%
Advice from family/friends	53	63.1%
Recommendations of specialised entities (other than the institution where you acquired the product)	37	44.0%
Recommendations in specialty newspapers and magazines or product comparison sites	28	33.3%
Information collected at the institution's counter (e.g. leaflets, etc.)	35	41.7%
Information on the internet	42	50.0%
Advertising on TV, radio, newspapers, ...	24	28.6%
Own experience in previous acquisitions	51	60.7%

**Source:** Own Elaboration

Articles

Thus, the great source of influence on the choice of product are the advice at the counter, advice from family/friends, which goes against the studies presented and the results of the 3rd survey on financial literacy (40% followed the advice of the counter and 34.5% followed the advice of family and friends), and own experience in previous acquisitions.

**C.3 Financial expertise**

As for the questions of financial knowledge, the results were very positive as most of the respondents answered correctly all questions except for the last question relating to compound interest. Thus, the respondents

have a high level of financial knowledge, which goes against the expectation according to the review of the literature. The respondents also have a higher rate of correct answers (6.2) than the third survey on financial literacy (4.8), however this difference in values may be related to the fact that there is a low number of respondents over 70 years, which are, according to Banco de Portugal, the age group that give the fewest correct answers. It should be noted that, as in the sample in question, the less positive results concern issues related to the calculation of simple and compound interest.

**Table 11.** Financial knowledge.

	N	%
High inflation means cost of living rises fast	80	95.2%
An investment with a high return usually has a high risk	80	95.2%
It is usually possible to reduce investment risk in the capital market by buying a diversified set of stocks	54	64.3%
Suppose five siblings receive €1,000 and that amount is distributed equally by all. How much money does each one get?	84	100.0%
Suppose now that the five siblings have to wait a year to receive their share of the €1,000. If the rate of inflation is 2 per cent, in a year they will be able to buy it?	52	61.9%
If you lend a friend 25 euros and he pays you back 25 euros the next day, how much interest has he paid?	83	98.8%
Suppose you put €100 into a term deposit with an annual interest rate of 2 per cent. How much will you have in the account at the end of a year? Consider that no fees or fees are charged	56	66.7%
And after 5 years?	39	46.4%

Source: Own Elaboration

**Table 12 - Descriptive analysis of variables.**

N=84	Min	Max	M	SD
Attitudes	1.00	4.00	2.06	0.71
Payment planning	0.00	1.00	0.69	0.23
Control	1.00	5.00	3.88	0.96
Decision making	0.00	0.80	0.28	0.17
Influence	0.00	1.00	0.47	0.28
Knowledge	0.38	1.00	0.78	0.15
Sum of causes	1.00	5.00	2.35	1.12

Source: Own Elaboration

### Descriptive analysis of variables

The attitude variable has a maximum of 5 (I totally disagree) and a minimum of 1 (I totally agree). The average is 2.06, which shows that most people disagree with the statements and think there should be planning. As for the variable payment plan, the maximum is 1 (applies) and the minimum is 0 (does not apply). The questions are about respondents' position on payments and expense planning. The average is 0.69, which represents that most respondents have good payment and expense planning habits.

Regarding the control variable, the minimum is 1 (I totally disagree) and the maximum is 5 (I totally agree). The average is 3.88. Thus, most respondents agree with the statements about spending and expenses, which demonstrates that they make a control. When it comes to taking a position on debts, the minimum is 0 (I didn't) and the maximum is 1 (I did). Given that the average is 0.28, few insolvent people have opted for the options listed. Regarding the variable influence, the results range from 0 (no influence) to 1 (influence). Since the average is 0.47, it indicates that respondents are moderately influenced. As for knowledge, on a scale of 0 (incorrect) and 1 (correct) the average is 0.75,

indicating that individuals have a high level of knowledge. Finally, regarding the variable sum of causes, the scale varies between the minimum 0 and the possible maximum 7, although the observed maximum is 5, the mean is 2.35, which indicates a low number of causes.

### 3.3. Hypothesis analysis

After the descriptive analysis, statistical analysis was carried out to answer the research hypotheses previously established and that support the main objective of this study.

- H1 - Sociodemographic variables are related to the sum of causes of insolvency.

Observing Table 13,  $F = 5.193$  and the significance value ( $p = 0.001$ ) is less than the adopted significance level (0.05). Thus,  $H_0$  is rejected and it is concluded that there is a statistically significant dependence between employment status and the sum of causes of insolvency. The highest average sum of causes is recorded among the unemployed ( $M=3.83$ ) and self-employed ( $M=3.14$ ), while retirees have the lowest average ( $M=1.84$ ).

- H2 - Sociodemographic variables are related to financial literacy.

**Table 13.** ANOVA The link between the sum of cases and the employment situation.

		N	M	SD	F	p
	Unemployed	6	3.83	0.40	5.193	0.001 **
Sum of causes of insolvency	Employed worker	56	2.23	1.00		
	Self-employed worker	7	3.14	1.34		Effect size
	Retired	13	1.84	1.06		0.208
	Other	2	2.00	1.41		

\*\*  $p \leq 0.01$

Source: Own Elaboration

Articles

From the observation of tables 14 to 17, in the case of the relationships of the variables (1) income – payment plans, (2) income – knowledge, (3) employment status – knowledge, and (4) age – influence, there is dependence between each pair of variables. Analysing each table, the following significant

relations are inferred: (1) respondents who earn income up to € 1,000 have a better payment planning, (2) the knowledge increases with increasing income, (3) the knowledge is higher for self-employed respondents, followed by unemployed and employed, decreasing for

**Table 14.** ANOVA relationship between payment planning and income.

		N	M	SD	F	p
Payment planning	Up to € 500	14	0.76	0.14	3.554	0.018 *
	Between € 501 and € 1.000	35	0.75	0.22		Effect size
	Between € 1.001 and € 1.500	21	0.57	0.28		0.118
	More than € 1.501	14	0.65	0.17		

\*  $p \leq 0.05$

Source: Own Elaboration

**Table 15.** ANOVA relationship between knowledge and income.

		N	M	SD	F	p
Knowledge	Up to € 500	14	.72	.16	3.375	0.022 *
	Between € 501-1.000	35	.75	.13		Effect size
	Between € 1.001-1.500	21	.80	.17		0.112
	More than € 1.501	14	.88	.12		

\*  $p \leq 0.05$

Source: Own Elaboration

**Table 16.** ANOVA The relationship between knowledge and employment status.

		N	M	SD	F	p
Knowledge	Unemployed	6	0.79	0.15	2.556	0.045 *
	Employed worker	56	0.80	0.15		
	Self-employed worker	7	0.87	0.10		Effect size
	Reformed	13	0.69	0.14		0.115
	Other	2	0.62	0.17		

\*  $p \leq 0.05$

Source: Own Elaboration

**Table 17.** ANOVA The relationship between influence and age.

		N	M	SD	F	p
Influence	25 to 39 years	10	0.65	0.20	5.256	0.007 **
	40 to 54 years	40	0.51	0.29		Effect size
	55 years or older	34	0.36	0.25		0.115

\*\*  $p \leq 0.01$

Source: Own Elaboration

## Articles

retired respondents, and (4) the influence decreases with increasing age.

As for the other sociodemographic and financial literacy variables, there is no dependence between them, since in these cases the significance is higher than 5%. The results obtained are in line with the literature review that shows that individuals with higher incomes (Atkinson & Messy, 2012) and more years of service (Chen, 1998) have more financial knowledge.

- H3 – Financial literacy is negatively related to the sum of causes of insolvency.

From the observation of Table 18, the sum of causes of insolvency and decision-making have a positive significant correlation ( $r=0.401$ ,  $p<0.001$ ). Therefore, H3 is rejected so there is no negative dependence between the variables, the results indicate that a

greater sum of insolvency causes leads to more active decision-making.

There are other significant correlations, which are negative between control and attitudes ( $r=-0.245$ ,  $p=0.025$ ) and between knowledge and payment planning ( $r=-0.332$ ,  $p=0.002$ ), and positive between influence and decision making ( $r=0.242$ ,  $p=0.027$ ).

According to the table above, the only variable that presents a significant relation with the dependent variable sum of causes of insolvency is decision making ( $B=2.56$ ,  $p<.001$ ), which reinforces the previous conclusion from the Pearson correlation. The regression results for this variable imply that a change of one unit in the scale of the decision-making dimension induces a mean increase of 2,56 in the sum of causes of insolvency.

However, it was expected that there would be more relationships, namely with the

**Table 18.** Pearson (r) correlation between attitudes, payment planning, control, decision-making, influence, knowledge and sum of causes.

N=84		Attitudes	Payment Planning	Control	Decision making	Influence	Knowledge	Sum of causes
Attitudes	r	1						
	p							
Planning Payments	r	-0.105	1					
	p	0.340						
Control	r	-0.245*	0.142	1				
	p	0.025	0.197					
Decision making	r	0.102	0.141	-0.048	1			
	p	0.357	0.200	0.665				
Influence	r	-0.008	0.104	0.088	0.242*	1		
	p	0.943	0.348	0.424	0.027			
Knowledge	r	0.046	-0.332**	0.107	-0.057	0.105	1	
	p	0.676	0.002	0.333	0.605	0.340		
Sum of causes of insolvency	r	0.026	0.174	-0.053	0.401**	0.029	0.004	1
	p	0.813	0.113	0.634	0.000	0.792	0.974	

\*  $p\leq 0.05$ , \*\*  $p\leq 0.01$

Source: Own Elaboration

**Table 19.** Linear regression between the variables attitudes, payment planning, control, decision-making, influence, payment planning, control and knowledge with the sum of causes of insolvency.

	B	Error	Confidence interval limits		Beta	t	p
			Lower	Higher			
(Constant)	1.03	0.98	-0.93	2.99		1.04	0.299
Attitudes	-0.02	0.16	-0.36	0.30	-0.01	-0.17	0.864
Payment planning	0.79	0.53	-0.27	1.87	0.16	1.48	0.143
Control	-0.07	0.12	-0.33	0.18	-0.06	-0.59	0.555
Decision making	2.56	0.68	1.20	3.93	0.40	3.75	0.000 ***
Influence	-0.36	0.43	-1.22	0.50	-0.09	-0.84	0.402
Knowledge	0.71	0.79	-0.88	2.30	0.09	0.89	0.375

\*\*\*  $p \leq 0.001$

Source: Own Elaboration

variable knowledge, since according to the literature (Huston, 2010), individuals with low knowledge have difficulties in making correct financial decisions, which can lead to an increase in the sum of causes of insolvency.

## Conclusion

This study aimed to analyse the relationship between sociodemographic variables, the level of financial literacy and the sum of causes of insolvency. For this purpose, a questionnaire was created with 84 responses from individuals declared insolvent.

Looking at the sociodemographic variables, there was a higher probability of over-indebtedness in women, divorced, aged between 40 and 54 years, low literary qualifications, at the level of secondary education and average incomes of one national minimum wage (between € 500 and € 1,000).

When analysing the causes of insolvency, economic factors (unemployment or reduction of income and unexpected events) are highlighted as opposed to social factors (divorce). In addition, it was found that

unemployed and self-employed workers have a higher sum of causes of insolvencies.

Regarding financial literacy, the sample showed a high level of financial knowledge (with an average value of 6.2 out of 8 possible answers, higher even than the national average of 4.8). These findings appear to contradict much of the existing literature, which frequently reports lower financial literacy among insolvent individuals. One possible explanation for this paradox is the phenomenon of overconfidence, where individuals overestimate their ability to apply financial concepts in real-life contexts. Moreover, financial knowledge alone may not be sufficient to prevent insolvency when individuals face external shocks such as unemployment, divorce, or health problems. This suggests that financial literacy, while important, must be complemented by structural and social support mechanisms to ensure greater financial resilience.

Our findings indicate that financial decision-making is strongly shaped by reliance on family advice and bank staff, suggesting that informational asymmetries and cultural practices may play a more decisive role than

technical financial knowledge in the path to insolvency.

Regarding behaviours and attitudes, respondents reveal good payment planning, especially in the group with incomes up to € 1,000, and spending, avoiding impulsive purchases.

In terms of choosing financial products, most of the participants report researching different options at various institutions, positive and unexpected behaviour. However, it was found that the respondents are quite influenced, especially the age group up to 39 years, by advice given over the counter and by friends.

The respondents declared insolvency already some time ago and, due to their difficulties, they changed their attitudes and behaviour; therefore, they are above national survey averages in some of these characteristics. This suggests that individuals who have experienced insolvency may adapt over time, becoming more cautious in their financial decision-making and improving their financial behaviour in ways that would not be expected based solely on their sociodemographic profile.

When comparing these results with international evidence, it becomes clear that Portuguese findings both align with and diverge from broader trends. For example, unemployment and income shocks emerge as leading causes of insolvency in Portugal, which is consistent with studies in the United States, Brazil, and across Europe that also identify job loss and income reduction as primary triggers of over-indebtedness. At the same time, our data reveal relatively higher levels of self-reported financial knowledge among insolvent individuals than those typically documented in international research. This divergence may reflect specific

contextual factors, such as Portugal's strong reliance on family networks and bank staff advice, which can foster confidence but not necessarily effective decision-making. Thus, while the structural drivers of insolvency appear broadly similar across contexts, the Portuguese case underscores the importance of cultural and institutional specificities that shape how financial literacy interacts with vulnerability to insolvency.

The study reinforces the importance of providing financial knowledge to the population, focusing on the calculation of interest, an area identified as the one in which there are greater difficulties. It is also recommended to promote financial education, so that individuals are more informed and are more autonomous, reducing dependence on third-party advice when choosing financial products. Finally, it is suggested to carry out awareness campaigns on the impacts of unemployment and income reduction, providing tools to prevent insolvency in periods of economic instability.

Despite the rigor with which the research was conducted, it has some limitations that demonstrate some of the difficulties inherent in its elaboration.

First, the low number of responses obtained stems from the difficulty in obtaining the contacts of the respondents, but also from the sensitivity of the topic. Thus, a sample large enough to analyse variables such as geographic location was not obtained. Another limitation relates to the reliability of the answers, and it is not possible to ascertain their veracity. Finally, the difficulty in relating the themes, since they are concepts, little studied, like the phenomenon of insolvency of a single person.

In addition, the use of self-reported data may have introduced bias, particularly in

the assessment of financial behaviour and knowledge, as respondents may have provided socially desirable answers. Moreover, the cross-sectional design prevents establishing casual relationships between financial literacy and insolvency causes.

For future investigations, it is suggested to extend the study to a larger group of respondents, namely using a data collection method that allows individuals without the possibility of answering an online questionnaire. It is also recommended that objective financial performance indicators be combined with survey data and that longitudinal designs be adopted to track changes over time. It is also suggested that the household of the respondents be analysed, as well as that the study be extended outside the country so that there are international comparisons.

## References

- AGARWAL, S., DRISCOLL, J. C., GABAIX, X., & LAIBSON, D. (2009). The Age of Reason: Financial Decisions over the Life Cycle and Implications for Regulation. *Brookings Papers on Economic Activity*, 2009, 51–101.
- Anderson, C., Kent, J., Lyter, D., Siegenthaler, J., & Ward, J. (2000). *Personal Finance and the Rush to Competence: Financial Literacy Education in the U.S.*
- Atkinson, A., McKay, S., Collard, S., & Kempson, E. (2007). Levels of Financial Capability in the UK. *Public Money & Management*, 27(1), 29–36. <https://doi.org/10.1111/j.1467-9302.2007.00552.x>
- Atkinson, A., & Messy, F. (2012). *Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study.*
- Babiarz, P., & Robb, C. A. (2014). Financial Literacy and Emergency Saving. *Journal of Family and Economic Issues*, 35(1), 40–50. <https://doi.org/10.1007/s10834-013-9369-9>
- Banco de Portugal (2021). Financial and digital inclusion and choice of banking products in Portugal 2020 | December 2021. Edition Banking Conduct Supervision Department. Design Communication and Museum Department | Design Unit. ISBN (online) 968-989-678-807-0. Retrieved in 2025/07/17 at [https://www.bportugal.pt/sites/default/files/anexos/pdf-boletim-relatorioinclusaofinanceiradigital\\_en.pdf](https://www.bportugal.pt/sites/default/files/anexos/pdf-boletim-relatorioinclusaofinanceiradigital_en.pdf)
- Baraňano, A. M. (2004). *Métodos e Técnicas de Investigação em Gestão: Manual de apoio à realização de trabalhos de investigação.*
- Barron, J. M., Staten, M. E., & Wilshusen, S. M. (2002). THE IMPACT OF CASINO GAMBLING ON PERSONAL BANKRUPTCY FILING RATES. *Contemporary Economic Policy*, 20(4), 440–455. <https://doi.org/10.1093/cep/20.4.440>
- Betti, G., Dourmashkin, N., Rossi, M., & Ping Yin, Y. (2007). Consumer over indebtedness in the EU: measurement and characteristics. *Journal of Economic Studies*, 34(2), 136–156. <https://doi.org/10.1108/01443580710745371>
- Braucher, J. (2006). Theories of Overindebtedness: Interaction of Structure and Culture. *Theoretical Inquiries in Law*, 7(2). <https://doi.org/10.2202/1565-3404.1128>
- Brennan, C., & Gallagher, K. (2007). Consumer overindebtedness: a review of the quality of money advice services in Scotland. *International Journal of Consumer Studies*,

## Articles

- 31(6), 623–629. <https://doi.org/10.1111/j.1470-6431.2007.00627.x>
- Calcagno, R., & Monticone, C. (2015). Financial literacy and the demand for financial advice. *Journal of Banking & Finance*, 50, 363–380. <https://doi.org/10.1016/j.jbankfin.2014.03.013>
- Carvalho, R. N., & Sampaio, P. R. (2019). The profile of the Brazilian over indebted consumer in the economic crisis worsening: A comparative analysis 2014-2016. *Revista de Estudos Empíricos Em Direito*, 6(1). <https://doi.org/10.19092/reed.v6i1.266>
- Chen, H., & Volpe, R. P. (1998). An Analysis of Personal Financial Literacy Among College Students. *Financial Services Review*, 7(2), 107–128. <https://doi.org/10.1016/S1057->
- Coutinho, C. (2014). *Metodologia em ciências sociais e humanas: teoria e prática*. Coimbra: Almedina.
- D'Alessio, G., & Iezzi, S. (2013). Household Over-Indebtedness: Definition and Measurement with Italian Data. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2243578>
- Damayanti, S. M., Murtaqi, I., & Pradana, H. A. (2018). The importance of financial literacy in a global economic era. In *The Business and Management Review* (Vol. 9).
- Delavande, A., Rohwedder, S., & Willis, R. J. (2008). Preparation for Retirement, Financial Literacy and Cognitive Resources. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1337655>
- Domowitz, I., & Sartain, R. L. (1999). Determinants of the Consumer Bankruptcy Decision. *The Journal of Finance*, 54(1), 403–420.
- Domurath, I. (2018). Book Review: Personal Insolvency in the 21st Century – A Comparative Analysis of the US and Europe by Iain Ramsay. *Journal of Consumer Policy*, 41(1), 89–93. <https://doi.org/10.1007/s10603-017-9365-9>
- Edmiston, K. D., & Gillett-Fisher, M. C. (2006). *Financial Education at the Workplace Evidence from a Survey of Federal Reserve Bank Employees*. <http://was4.hewitt.com/hewitt/resource/newsroom>
- Edwards, R., Allen, M. W., & Hayhoe, C. R. (2007). Financial Attitudes and Family Communication About Students' Finances: The Role of Sex Differences. *Communication Reports*, 20(2), 90–100. <https://doi.org/10.1080/08934210701643719>
- Emmons, W. R. (2005). Consumer-Finance Myths and Other Obstacles to Financial Literacy. In *Saint Louis University Public Law Review* (Vol. 24, Issue 2, pp. 335–362).
- Feinberg, R. A. (1986). Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation. *Journal of Consumer Research*, 13(3), 348. <https://doi.org/10.1086/209074>
- Fisher, J. D. (2019). Who Files for Personal Bankruptcy in the United States? *Journal of Consumer Affairs*, 53(4), 2003–2026. <https://doi.org/10.1111/joca.12280>
- Frade, C. C. F. (2008). A regulação do sobreendividamento. In *Frade, Catarina - A regulação do sobreendividamento*. Coimbra, 2007.
- Frade, C., & de Jesus, R. (2020). NINA/LILA debtors under the Portuguese Insolvency Act: A hidden problem in plain sight? *International Insolvency Review*, 29(S1). <https://doi.org/10.1002/iir.1360>

- Gathergood, J. (2012). Self-control, financial literacy and consumer over-indebtedness. *Journal of Economic Psychology*, 33(3), 590–602. <https://doi.org/10.1016/j.joep.2011.11.006>
- Graham, J. R., Harvey, C. R., & Huang, H. (2009). Investor Competence, Trading Frequency, and Home Bias. *Management Science*, 55(7), 1094–1106. <https://doi.org/10.1287/mnsc.1090.1009>
- Grohmann, A., Kouwenberg, R., & Menkhoff, L. (2015). Childhood roots of financial literacy. *Journal of Economic Psychology*, 51, 114–133. <https://doi.org/10.1016/j.joep.2015.09.002>
- Hansen, T. (2017). The moderating effects of financial broad scope trust on consumer knowledge, cognitive effort, and financial healthiness. *Journal of Consumer Behaviour*, 16(2), 161–175. <https://doi.org/10.1002/cb.1621>
- Huhmann, B. A., & McQuitty, S. (2009). A model of consumer financial numeracy. *International Journal of Bank Marketing*, 27(4), 270–293. <https://doi.org/10.1108/02652320910968359>
- Huston, S. J. (2010). Measuring Financial Literacy. *Journal of Consumer Affairs*, 44(2), 296–316. <https://doi.org/10.1111/j.1745-6606.2010.01170.x>
- Jappelli, T., & Padula, M. (2013). Investment in financial literacy and saving decisions. *Journal of Banking & Finance*, 37(8), 2779–2792. <https://doi.org/10.1016/j.jbankfin.2013.03.019>
- Klapper, L., & Lusardi, A. (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management*, 49(3), 589–614. <https://doi.org/10.1111/fima.12283>
- Lea, S. E. G., Webley, P., & Walker, C. M. (1995). Psychological factors in consumer debt: Money management, economic socialization, and credit use. *Journal of Economic Psychology*, 16(4), 681–701. [https://doi.org/10.1016/0167-4870\(95\)00013-4](https://doi.org/10.1016/0167-4870(95)00013-4)
- Lusardi, A., & Mitchell, O. (2011). *Financial Literacy and Retirement Planning in the United States*. <https://doi.org/10.3386/w17108>
- Lusardi, A., & Mitchell, O. S. (2013). Debt and debt management among older adults. *Draft. Ann Arbor, MI: Michigan Retirement Research Center*.
- Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, 52(1), 5–44. <https://doi.org/10.1257/jel.52.1.5>
- Majamaa, K., Lehtinen, A.-R., & Rantala, K. (2019). Debt Judgments as a Reflection of Consumption-Related Debt Problems. *Journal of Consumer Policy*, 42(2), 223–244. <https://doi.org/10.1007/s10603-018-9402-3>
- MONTICONE, C. (2010). How Much Does Wealth Matter in the Acquisition of Financial Literacy? *The Journal of Consumer Affairs*, 44(2), 403–422. <https://research.ebsco.com/linkprocessor/plink?id=75aa14cf-fb09-3f0b-a431-e0ab834db933>
- Murthy, U., & Anthony Mariadas, P. (2017). Factors Affecting Fresh Graduate Bankruptcy at Young Age: The Case of Fresh Graduates in Kota Damansara. *International Journal of Business and Management*, 12(12), 194. <https://doi.org/10.5539/ijbm.v12n12p194>

## Articles

- Oliveira, I., Figueiredo, J., Cardoso, A., & Pocinho, M. (2022). The financial literacy of individuals declared insolvent in the courts in Portugal in 2020. *International Review of Economics*. <https://doi.org/10.1007/s12232-022-00407-2>
- Omojolaibi, J. A., & Iwegbu, O. (2023). The Effect of Financial Inclusion and Financial Literacy on Financial Integration of West African Monetary Zone (Wamz). *The Journal of Developing Areas*, 57(2), 159–180. <https://doi.org/10.1353/jda.2023.0027>
- Paškevičius, A., & Jurgaitytė, N. (2015). Bankruptcy of Natural Persons in Lithuania: Reasons and Problems. *Procedia - Social and Behavioural Sciences*, 213, 521–526. <https://doi.org/10.1016/j.sbspro.2015.11.444>
- Pinto, M. B. (2005). Information Learned From Socialization Agents: Its Relationship to Credit Card Use. *Family and Consumer Sciences Research Journal*, 33(4), 357–367. <https://doi.org/10.1177/1077727X04274113>
- Pocinho, M. (2012). *Metodologia de Investigação e Comunicação do Conhecimento Científico*.
- Potrich, A. C. G., Vieira, K. M., & Kirch, G. (2015). Determinantes da Alfabetização Financeira: Análise da Influência de Variáveis Socioeconômicas e Demográficas. *Revista Contabilidade & Finanças*, 26(69), 362–377. <https://doi.org/10.1590/1808-057x201501040>
- REMUND, D. L. (2010). Financial Literacy Explicated: The Case for a Clearer Definition in an Increasingly Complex Economy. *Journal of Consumer Affairs*, 44(2), 276–295. <https://doi.org/10.1111/j.1745-6606.2010.01169.x>
- ROBERTS, J. A., & JONES, E. (2001). Money Attitudes, Credit Card Use, and Compulsive Buying among American College Students. *Journal of Consumer Affairs*, 35(2), 213–240. <https://doi.org/10.1111/j.1745-6606.2001.tb00111.x>
- Santos, B. de S. (1992). O Estado, as Relações Salariais e o Bem-Estar Social na Semiperiferia: O Caso Portugues. In *Oficina do CES*. 32 (1992). Centro de Estudos Sociais, 1992.
- Sawatzki, C. (2017). Lessons in financial literacy task design: authentic, imaginable, useful. *Mathematics Education Research Journal*, 29(1), 25–43. <https://doi.org/10.1007/s13394-016-0184-0>
- SCHMEISER, M. D., & SELIGMAN, J. S. (2013). Using the Right Yardstick: Assessing Financial Literacy Measures by Way of Financial Well Being. *Journal of Consumer Affairs*, 47(2), 243–262. <https://doi.org/10.1111/joca.12010>
- Selvanathan, M., Krisnan, U. D., & Wen, W. C. (2016). Factors Effecting Towards Personal Bankruptcy among Residents: Case Study in Klang Valley, Malaysia. *International Journal of Human Resource Studies*, 6(3), 98. <https://doi.org/10.5296/ijhrs.v6i3.10092>
- Strotz, R. H. (1955). Myopia and Inconsistency in Dynamic Utility Maximization. *The Review of Economic Studies*, 23(3), 165. <https://doi.org/10.2307/2295722>
- Titus, P. M., Fanslow, A. M., & Hira, T. K. (1989). Net Worth and Financial Satisfaction as a Function of Household Money Managers' Competencies. *Home Economics Research Journal*, 17(4), 309–318. <https://doi.org/10.1177/1077727X8901700404>

- Townley-Jones, M., Griffiths, M., & Bryant, M. (2008). Chronic consumer debtors: the need for specific intervention. *International Journal of Consumer Studies*, 32(3), 204–210. <https://doi.org/10.1111/j.1470-6431.2008.00666.x>
- Vieira, E. (2012). What do we know about financial literacy? A Literature review. *Marmara Journal of European Studies*, 20, 23–38.
- Warren, E. (2002). What is a Women's Issue-Bankruptcy, Commercial Law, and Other Gender-Neutral Topics. In *Harvard Women's Law Journal* (Vol. 25, pp. 19–56).
- White, M. J. (2007). Bankruptcy Reform and Credit Cards. *Journal of Economic Perspectives*, 21(4), 175–199. <https://doi.org/10.1257/jep.21.4.175>

## APPENDIX – Questionnaire

This questionnaire aims to analyse the relationship between sociodemographic variables, financial literacy levels, and insolvency declarations. All collected data will remain confidential and anonymous, used solely for the purposes of this research.

This survey is directed at individuals aged 18 or over who have been declared insolvent (or are currently insolvent). Completion time is 5–10 minutes. Thank you for your valuable contribution.

### Informed Consent

Do you agree to participate in this survey, providing informed consent for your responses to be collected and statistically analysed for the purposes of this research?

Yes, No

### Demographic Questions

**Gender:** Female, Male, Prefer not to say

**Age:** 18–24, 25–39, 40–54, 55–69, 70+

**Education Level:** 1<sup>st</sup> and 2<sup>nd</sup> cycle (Year 6), 3<sup>rd</sup> cycle (Year 9), Secondary education (Year 12), Bachelor's degree, Master's degree, PhD

**Marital Status:** Single, Union or Married, Divorced, Widowed

**Employment Status:** Student, Unemployed, Employed (salaried), Self-employed, Retired, Other

**Monthly Income (€):** Up to €500, €501–€1,000, €1,001–€1,500, €1,501–€2,000, €2,001–€2,500, More than €2,500

**Geographic Location:** (List of Portuguese districts/regions)

### Insolvency Process Questions

**Year of Insolvency Declaration:** Before 2013, 2014–2016, 2017–2019, 2020–2022, 2023–present

**Causes of Insolvency (Tick "Applies" or "Does not apply"):** Health problems, Unemployment or reduced income, Divorce or separation, Personal financial mismanagement, Being a guarantor, Gambling, Unexpected events

### Financial Literacy Questions

Financial Attitudes (Scale: 1: Strongly Disagree – 5: Strongly Agree)

"I take more pleasure in spending money than saving for the future"

"Money exists to be spent."

"I live for the present and don't worry about the future."

Financial Behaviours

Payment planning (Tick "Apply" or "Do not apply")

Make a plan to manage your income and expenses

Take note of your expenses

Separates money to pay bills from money to pay day-to-day expenses

## Articles

Make a note of the bills you have to pay so you don't forget  
Uses the bank's app or a personal finance management tool to control expenses  
Has automatic payments for regular expenses  
Control of expenses (Scale: *Strongly Disagree – Strongly Agree*)  
I personally and systematically control my personal finances  
I set long-term savings goals and do everything I can to meet them  
I pay my bills on time  
Before I buy anything, I consider carefully if I can bear this expense

### Taking a stand on debt (Tick "Did" or "Did not")

I used money from my savings  
Reduced expenses  
I sold an asset I had  
I worked longer to make more Money  
I asked for financial support from the state  
I asked friends and/or family for help  
Borrowed from family or friends  
I asked my employer (Ex: loan, advance salary ...)  
Pawned goods  
I used credit from my account/line of credit I already had  
I used the credit card to pay regular expenses or withdraw money  
Take out a new loan from a financial institution  
I made a loan from another entity (informal)  
I got an overdraft on the account more than the authorized  
I paid my bills late / I didn't pay my bills

### Product choice (Tick "Apply" or "Do not apply")

I did not research and did not consider any other options.  
I searched but didn't find any option to consider  
I considered several options from the same institution  
I considered several options from different institutions before making my decision

### Influence on the choice of products (Tick "Influenced" or "Did not influence")

Advice at the counter of the institution where you purchased the product  
Advice from family/friends  
Recommendations of specialised entities (other than the institution where you acquired the product)  
Recommendations in specialty newspapers and magazines or product comparison sites  
Information collected at the institution's counter (e.g. leaflets, etc.)  
Information on the internet  
Advertising on TV, radio, newspapers, ...  
Own experience in previous acquisitions

## Financial Expertise

*(True/False):*

High inflation means cost of living rises fast

An investment with a high return usually has a high risk

It is usually possible to reduce investment risk in the capital market by buying a diversified set of stocks

*(Open-Ended and Multiple-Choice Questions):*

Suppose five siblings receive €1,000 and that amount is distributed equally by all. How much money does each one get?

Suppose now that the five siblings have to wait a year to receive their share of the €1,000. If the rate of inflation is 2 per cent, in a year they will be able to buy it?

More than today      The same as today      Less than today      Don't know

If you lend a friend 25 euros and he pays you back 25 euros the next day, how much interest has he paid?

Suppose you put €100 into a term deposit with an annual interest rate of 2 per cent. How much will you have in the account at the end of a year? Consider that no fees or fees are charged

And after 5 years (interest reinvested): Over €110      Exactly €110      Under €110