

# Financial Literacy and Economic Behavior in Curaçao

Jasmira T.E. Wiersma (University of Groningen, SONORO Community)<sup>1</sup>

PRELIMINARY DRAFT – PLEASE DO NOT CIRCULATE OR CITE!

## Abstract:

This paper examines the socioeconomic and demographic determinants of objective and subjective financial literacy in Curaçao to identify at-risk groups. We also investigate how various factors, including financial literacy, are associated with financial decisions making. Using data from the SONORO Community, a panel of households in Curaçao, we find that less than one in three respondents show an understanding of basic financial concepts. Especially the knowledge of the interest rate concept is remarkably low. Females, the lowly educated, low-income individuals, and elders fair worse for subjective and objective financial (interest) literacy. This is concerning as we observe that those with less knowledge of interest are more likely to resort to riskier methods of borrowing and are less likely to save. The results further highlight the importance of interest rate literacy and subjective financial literacy in financial decision-making. Their impact goes above and beyond that of education. Given the risks of financial illiteracy, policymakers should potentially address gaps in financial knowledge through financial education, primarily targeted to the more vulnerable.

**Keywords:** financial literacy, financial behavior, Small Island Developing States (SIDS)

**JEL codes:** D14, D91, G51, G53

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<sup>1</sup> Email: [j.t.e.wiersma@rug.nl](mailto:j.t.e.wiersma@rug.nl). Funding from the Dutch Research Council (NWO), Caribbean Research Program 2016 (File number: ALWCA.2016.049) is gratefully acknowledged. I thank Rob Alessie and Tim Kaiser for their useful comments. I also thank participants at the Mannheim Institute for Financial Education Early Career Workshop (November 2022) and the PhD brownbag seminar at University of Groningen (December 2022) for their insightful discussions.

## Introduction

The COVID-19 pandemic and the cost-of-living crisis have exposed households' financial fragility. "Curaçao already had an 'enormous poverty problem' - and corona makes it even bigger." That is the title of an article that appeared in de Volkskrant at the end of 2020. The COVID-19 crisis goes much beyond being 'just another crisis' and puts a magnifying glass on issues already there, such as poverty. Before the pandemic, about one in three households in Curaçao were already living below the poverty line (Social and Economic Council Curaçao (SER), 2017).<sup>2,3</sup> Poverty is common for retirees, the unemployed, female-parented single families, and the lowly educated. Evidence from other countries suggests that such households make unsound financial decisions. They often have no retirement savings, are over-indebted, and do not hold emergency funds, placing them at a further financial disadvantage (Lusardi & Mitchell, 2011; Lusardi, Schneider & Tufano, 2011; Wiersma et al., 2020). It has long been understood that financial literacy can increase a household's financial resilience. That is especially true in times of economic crises, such as the COVID-19 pandemic, high inflation, and the energy price shock

Studies have shown that financial literacy can help individuals make more assertive and efficient decisions in the monetary context of their lives (Lusardi & Mitchell, 2014; Van Rooij et al., 2011a). Basic financial management can help low-income households avoid predatory financial services, pay off debt, and gain long-term financial security (Van Rooij et al., 2011b). Despite growing evidence of the effects of financial literacy on financial behavior, data on financial literacy and financial behavior in Caribbean countries is scarce, and most countries do not have internationally comparable indicators on the issue. Unfortunately, this evidence is also unavailable for the small-scale developing country of Curaçao. Hence, this paper sets out to address this data gap by analyzing the financial literacy and financial behavior of citizens of Curaçao. In particular, we aim to answer the following questions; How well-equipped are the citizens of Curaçao to make informed financial decisions? What is their level of financial literacy, and who knows the most and the least? Are financial literacy measures associated with savvy financial behavior?

Given the importance of financial literacy, assessing the level of financial literacy and the prevalence of different forms of financial behavior in Curaçao is essential. Thereby, we can identify gaps and the aspects of financial literacy and behavior that must be addressed. In doing so, policymakers are better able to target efforts to increase citizens' financial knowledge and financial resilience.

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<sup>2</sup> Curaçao is a Lesser Antilles Island country in the southern Caribbean Sea and the Dutch Caribbean region, about 65 km north of the Venezuela coast. Formerly, Curaçao was one of the six islands that compromised the Netherlands Antilles (N.A.). When the N.A. was dissolved in 2010, Curaçao became a constituent and autonomous (to a certain degree) country within the Kingdom, together with Aruba and Sint Maarten.

<sup>3</sup> The Economic and Social Council (SER) is an advisory and consultative body whose task is to advice the government and the Parliament of Curaçao on the social-economic policy to be conducted, matters of social-economic nature and on legal regulations of a social-economic nature.

A first attempt to measure financial literacy in Curaçao was made by the Central Bank of Curaçao and Sint Maarten (CBCS) in collaboration with the Central Bureau of Statistics Curaçao (CBS Curaçao) (CBCS and CBS Curaçao, 2020). This study focuses on payment behavior, financial inclusion, financial literacy, and financial satisfaction in Curaçao in 2020. However, the indicator used to measure financial literacy in their study does not allow for international comparisons. Furthermore, no attempt was made to study the associations between financial literacy, financial behavior, and socioeconomic and demographic characteristics. The present paper adds to the literature by examining financial literacy in Curaçao using international standardized questions. This enables us to make comparisons of financial literacy performance between Curaçao and multiple countries worldwide.

Furthermore, using multivariate analyses to study financial literacy, financial behavior, and their determinants, we shed light on who knows the most and who knows the least to identify potential gaps and the at-risk groups. Our data allow us to study linkages between (problematic) debt, saving, financial literacy, socioeconomic characteristics, and other personal traits. Resultantly, we can identify the factors associated with sound financial behavior. Finally, our study gives insight into households' financial susceptibility to indebtedness as we not only

Data for the empirical analysis stems from a telephone interview administered in the third quarter of 2020 among members of the SONORO Community, a panel of households in Curaçao. A total of 225 respondents completed the interview. The survey contained questions about financial literacy and saving and debt behavior. The specific questions we use to measure financial literacy stem from Standard & Poor's Ratings Services Global Financial Literacy Survey (S&P Global FinLit Survey), the largest, most comprehensive measure of financial literacy (see Klapper et al., 2015).

The paper is organized as follows: in the next section, we summarize the literature on financial behavior and provide some background on Curaçao. Section 3 describes our data sources. Section 4 presents and discusses our results on financial literacy in Curaçao and the findings on the asset and debt holdings. It further summarizes our main findings on the associations between financial literacy and financial behavior. In section 5, we perform a sensitivity analysis to investigate the robustness of our results. Finally, in section 6, we discuss the implications of our findings for policymakers and future research.

## **2. Literature Review**

### **2.1 Background Curaçao**

Developments in the past decade in Curaçao have increased the financial burden borne by the inhabitants. More specifically, the public pension (AOV) and health insurance schemes have become less generous (Curaçao Chronicle, 2013). In February 2013, the government introduced a new Basic Health Care Insurance (BZV), limiting the previous BZV package and reducing the prices paid for medication. In

March 2013, the government increased the retirement pension age from 60 to 65 and raised employee premiums. Moreover, there is no mandatory supplementary pension, no unemployment insurance, and the AOV is insufficient to make ends meet.<sup>4</sup> The maximum AOV in 2018 is NAf. 862 for those who have been insured for a total of 50 years.<sup>5</sup> In comparison, the poverty line for a one-person household was NAf. 1,249 in 2018 (Maduro-Jeandor, 2019). According to SER (2017), 53.4% of households living below the poverty line have the AOV as their primary income. Thus, many decisions regarding finance are shifted away from institutions towards individuals. Therefore, individuals must be able to manage their finances sensibly to self-guard themselves against any income shocks and reduce their risk of living below the poverty line.

In addition to these developments, it has been frequently remarked that household debt is concerning high, which has raised concerns about the indebtedness of households in Curaçao (de Volkskrant, 2007; Romero, 2007; Knipselkrant Curaçao, 2013; Extra, 2017). According to Pau (2020), Curaçao's household indebtedness, measured through the debt-to-income ratio, was 94% in 2017. This means that for every NAf.100 of disposable income, households typically had NAf. 94 worth of debt obligations. Households with excessive debt are more prone to credit restrictions and shocks to income (employment), interest rates, and asset prices (Du Caju, Rycx, & Tojerow, 2016). Pau (2020) summarizes the main reasons for household debt problems in Curaçao. Some of the main reasons are divorce or separation, poor money management, and spending habits, cultural and socially acceptable behavior related to irresponsible borrowing behaviors, such as taking out a loan to pay off another loan, lack of a central credit control registry that records all lending, income drop due to job loss, retirement or illness, passing of the primary caregiver without leaving behind mitigating measures, such as a testament, pension or insurance for those left behind and gambling addiction. As the current over-indebtedness of households poses a threat to their financial well-being and macroeconomic and financial stability, Pau (2020) advises promoting financial literacy through education programs (and several other measures) to limit the household debt in Curaçao.

Garcia et al. (2013) argue that measuring financial literacy levels is a critical first step for nations wishing to efficiently design, implement, and evaluate the results of financial education programs. As discussed above, the first attempt to measure financial literacy in Curaçao was made by the CBCS and CBS Curaçao. However, they do not study the associations between financial literacy, financial behavior,

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<sup>4</sup> A three-pillar system characterizes the pension system in Curacao. The first pillar is the basic or state pension (AOV- Algemene Ouderdomsverzekering), which entitles someone to a minimum pension, provided that some legal criteria are met. The second pillar is a supplementary employer pension and an individual pension, which entail different retirement savings forms, for example, by depositing premiums for annuity insurance.

<sup>5</sup> NAf. Stands for Netherlands Antillean guilder. The average Euro to NAf. exchange rate in 2020 was 1 EUR= 2.0306 NAf. The average Dollar to NAf. exchange rate in 2020 was 1 USD= 1.7776 NAf.

and socioeconomic and demographic characteristics. According to Garcia et al. (2013), to build evidence-based, efficient financial education programs or strategies, policymakers and program designers must comprehensively understand the population's degree of financial knowledge, their financial behaviors, and how these are related.

## **2.2 Financial Literacy and Financial Behavior**

Sound-financial decision-making is crucial at every stage in life as it can have lasting effects on consumers and households. An extensive body of literature has confirmed how financial literacy positively shapes financial decisions. The concept of financial literacy has been debated and described in various ways across the literature. Financial literacy and financial knowledge are frequently used interchangeably. However, they do not entirely overlap. As Huston (2010) argues: “Financial knowledge is an integral dimension of, but not equivalent to, financial literacy. Financial literacy has an additional application dimension, implying that an individual must have the ability and confidence to use their financial knowledge to make financial decisions” (p. 307). Thus, a person with low skills may be able to compensate by using tools (e.g., a calculator or a computer) and thereby navigate successfully in matters related to personal finance. In this study, the focus is placed on financial literacy.

Against this background, when assessing an individual’s financial literacy, one must consider their knowledge of critical financial concepts and their confidence to apply them to make informed financial decisions. Thus, financial literacy can be measured in two ways: objectively, by using knowledge-based questions, and subjectively, by asking individuals to assess their knowledge level regarding (general) financial matters (Lind et al., 2020). Furthermore, studies have shown that both objective and subjective financial literacy are critical in understanding differences in financial behavior (see, for example, Allgood and Walstad, 2013; Anderson et al., 2017; Huston, 2010).

It has been further widely documented that financial literacy is related to sound financial decision making. The more financially savvy are *ceteris paribus* (even after controlling for educational attainment), the more likely to participate in the stock market (e.g., Van Rooij et al., 2011b), more likely to undertake retirement planning (e.g., Lusardi and Mitchell (several papers), yield higher returns on their saving accounts (e.g., Geogarakos et al., 2016) and less likely to use high-cost borrowing including payday loans, pawn shop, credit card debt or overdrawing accounts (see, e.g., Lusardi and Bassa Schereberg, 2013). Individuals with high levels of financial literacy are usually more savings orientated, borrow less, and are less likely to overspend income than consumers with low levels of financial literacy. For this study, financial behavior comprises individuals' savings and borrowing behavior (with a particular focus on informal/costlier sources of borrowing).

Some studies have shown that subjective financial literacy, or confidence in one's ability to engage in a particular financial behavior, is a better predictor of financial decision-making than objective financial literacy. For example, Anderson et al. (2017) showed that it is a better predictor of savings behavior. Similarly, Allgood and Walstad (2013) found that subjective financial knowledge is a stronger predictor of less costly practices in credit card usage than objective financial knowledge. A possible mechanism is that people with high financial confidence might be less reluctant to avoid financial information, which could affect behavior (Barrafrem et al., 2020). Beliefs about the extent of one's knowledge might thus be as important (or more) as actual knowledge regarding sound financial behavior. Thus, for households to make sound decisions, they should possess both sufficient objective and subjective financial literacy.

Financial institutions also stand to benefit from increased financial literacy, as informed clients pose less risk and constitute a market for sustainable financial services. This is especially relevant for Curaçao, where many households are over-indebted (Pau, 2020). Personal financial management skills also enable people to save for income and consumption smoothing in countries like Curaçao, where individuals face various risks, including but not limited to price volatility of agricultural products, illness, death of a breadwinner, loss of jobs and retirement, posing significant income shocks for many. Hence, people must have the knowledge and skills to navigate the financial landscape to become more financially resilient to big and minor shocks. Financially resilient families will contribute to a more financially resilient society. This can further lead to poverty reduction, welfare improvement, and improved quality of life.

### **3. Data**

#### **3.1 Sample**

The data for the empirical analysis stems from a telephone interview administered among members of the SONORO Community, a panel of households in Curaçao. In the panel, members are consulted on research questions related to finance and health in Curaçao every few years. Vis et al. (2021) provide a detailed discussion of the panel setup, which consists of several stages. Stage one comprises the sampling process. This involved taking a probability sample of 2,900 geographic coordinates out of almost 80 thousand coordinates of addresses in Curaçao. These coordinates were subsequently placed on a satellite view map. In stage two, the recruitment phase, trained local interviewers visited the randomly chosen addresses (2,486 of the coordinates were actual residential buildings). They invited one household member, preferably the head of the household, to join the panel. Finally, a face-to-face interview was held during the recruitment process between April 2018 and October 2019. This interview contained questions related to the demographic and socioeconomic characteristics of respondents. In total, 1,735 interviews were completed, with a response rate of 69.8 percent. At the end of

the interview, respondents were asked whether they would like to become a member of the SONORO Community. Respondents who indicated that they were willing or would consider participating in the panel are considered to be (prospective) members of the panel (869 respondents).

After completing the recruitment process, the respondents had to be consulted on health and financial-related matters. Due to the emergence of the COVID-19 pandemic, it was opted to move from face-to-face to telephone interviewing. This survey contained questions about background information, cultural factors, financial literacy, and financial behavior.

The working sample of the telephone survey consists of respondents aged 18 years or older who participated from September to October 2020. A total of 225 out of 395 members with a known telephone number completed the survey, with a response rate of 57 percent. Comparing the sample with national statistics, Vis et al. (2021) observe that the sample is representative of the population in terms of gender, income, and place of birth. However, some deviations are observed in the age categories, the oldest age group of 65 years or older is overrepresented, and the youngest age group of 18-34 years is underrepresented. This is also the case for education; the lowest education group is overrepresented, and the highest is underrepresented. Summary statistics are presented in Table 1 and discussed below.

The telephone interview data is enriched with demographic and socioeconomic information collected during recruitment. These include gender, age, place of birth, employment status, educational attainment, household composition, and net monthly household income. For income, we only have bracketed data. Regarding household composition, we distinguish between single parents who live independently (without a partner or other adults in the same household) and single parents who live under one roof with the child's grandparents. Educational attainment is a person's highest educational achievement in any field of study. The categories include elementary or pre-vocational education, first-level secondary education, second-level secondary education, and higher vocational or university education. First-level secondary education entails having completed the first two years of senior general secondary education (HAVO), pre-university education (VWO), or preparatory secondary education (VSBO). The second level is equivalent to completing HAVO, VWO, and secondary (senior) vocational education (SBO, MBO, or MTS).

All surveys conducted in the panel are available in the four most spoken languages on the island: Papiamentu, Dutch, English, and Spanish. Professional translators corrected Papiamentu and Spanish versions. Furthermore, before collection, the surveys are pilot tested on language use, clarity of the questions, and survey flow.<sup>6</sup> The summary statistics are presented in Table A1 in the Appendix.

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<sup>6</sup> In our multivariate analyses we controlled for the presence of interviewer and language effects. However, the results were not significant and not presented for brevity. They are available upon request.

### 3.2 Measuring variables of interest

In the current research, we differentiate between objective and subjective financial literacy. Objective financial literacy assesses a respondent's actual financial knowledge using knowledge-based questions. On the other hand, subjective financial literacy or self-assessed financial literacy (SAFL) refers to a respondent's perception of their financial literacy level. As discussed above, evidence suggests that both objective and subjective financial literacy are critical elements in understanding differences in financial behavior (see for example Allgood and Walstad, 2013; Anderson et al. 2017; Huston, 2010).

According to Lusardi and Mitchell (2006), several fundamental concepts lie at the basis of most financial decisions. Four of such concepts are (1) numeracy and capacity to do calculations related to interest rates, (2) understanding interest compounding, (3) understanding of inflation, and (4) understanding of risk diversification. An understanding of these principles is required for basic day-to-day financial transactions and financial planning (van Rooij et al., 2012). Lusardi and Mitchell (2006) have designed a standard set of questions known as the "Big Three" financial literacy questions to assess individuals' knowledge about these concepts. These questions have been widely used as the standard set of questions to measure financial literacy.

In this study, we employ a similar set of questions as the "Big Three" to gauge objective financial literacy. The specific questions we use stem from the S&P Global FinLit Survey, where telephone surveying was employed (see Klapper et al., 2015).<sup>7</sup> Using standardized questions that have been applied internationally enables comparisons of financial literacy performance across multiple countries. Klapper et al. (2015) include two additional questions to measure knowledge of interest compounding. However, we opt not to include these questions due to the length and time constraints of the telephone survey.

The questions are all multiple choice and include the options for respondents to answer with "do not know" or "refuse." The latter two options were read aloud; thus, respondents were made aware of these options. The first question probes knowledge of interest compounding in a simple setting. It does not require computation of skills but tests the understanding of the concept of earning interest on interest. The second question is related to the understanding of inflation, and it does not require any computational skills either. Instead, it is focused on apprehending the difference between real and nominal interest rates. The final question measures the understanding of risk diversification, a more advanced financial concept. The exact wording of the questions and the performance of the respondents for every individual question are presented in Table 1 and discussed in section 4.

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<sup>7</sup> In the S&P Global Survey more than 150,000 adults age 15 and older in over 140 different countries were interviewed (Klapper, Lusardi, & van Oudheusden, 2015).



Subjective/self-assessed financial literacy (SAFL) is measured by asking respondents: "*How is your understanding of financial matters? Good, average, or not that good*". Respondents can also state "do not know" or "refuse." This question is located at the beginning of the financial literacy module, meaning that respondents have to assess their knowledge before they answer the literacy questions.

Finally, several questions are included in the telephone survey to inquire about respondents' financial behavior. The majority of the questions stem from surveys that aim to gauge the financial behavior of individuals (such as the U.S. National Financial Capability Study (NFCS) and the OECD International Network on Financial Education, 2011, and the LISS panel).<sup>8</sup> Some questions were adapted to make them more appropriate for telephone interviewing and fit the context of Curaçao.

Respondents are asked about ownership of financial products, i.e., whether they own any of the following financial products: a current account, savings account or credit card, bonds, stocks, mutual funds, or other securities (referred to as the ownership of risky assets in the analysis). Furthermore, they are asked whether they saved money before the pandemic, how much trouble they had making ends meet, and to report their debt holdings in the months before the COVID-19 pandemic. One point of concern might be that we are measuring financial literacy in the current period (2020), while questions about financial assets refer to a time in the past (prior to 2020). Thus, financial literacy levels might be higher due to financial experiences. However, Alessie et al. (2011) investigate whether levels of financial literacy changed in the five years between 2005 and 2010 and document that financial knowledge did not increase. Hence, we do not expect the difference in periods of the measures to have an impact. The exact wording of all questions can be found in Appendix A1.

## **4. Results & Discussion**

### **4.1 Financial Literacy**

Table 1 presents descriptive statistics for every financial literacy question, the sum of correct answers, and SAFL. The findings reveal that the concept of inflation is the most understood among the respondents. Approximately 76 percent of respondents provide the correct answer, and only 3.1 percent report not knowing or refusing the answer. This is relatively higher than the world average of about 50 percent observed in the S&P Global FinLit survey (Klapper et al., 2015) and other Latin American countries, where less than half of the population of Brazil, Chile, Colombia, Costa Rica, Guatemala, and Peru do not have an understanding of inflation (Garcia et al., 2013). Our sample further outperforms other developed countries such as Sweden, Italy, Canada, and the United States (Almenberg & Säve-

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<sup>8</sup> More information on NFCS <https://www.usfinancialcapability.org/> and the LISS Panel: <https://www.lissdata.nl/>

Söderbergh, 2011; Boisclair & Lusardi, 2011; Fornero & Monticone, 2011; Lusardi & Mitchell, 2011). Hence, the understanding of inflation among the population of Curaçao is relatively good.

Although data on financial literacy in the Caribbean is scarce, in 2020, using the "Big Three" financial literacy, the Inter- American Development Bank (IDB) collected data on this matter via telephone surveys in Barbados and Suriname. In Barbados, 61 percent of the respondents correctly answer the inflation question, and 73 percent in Suriname (with inflation rates ranging from 22 to 59% in 2017-2021) (Beuermann, Frisano, & Álvarez Giles, 2020; Arteaga Garavito et al., 2021). Curaçao and Suriname are (former) constituent countries of the Kingdom of the Netherlands and have similar educational systems. Nevertheless, data from The Netherlands indicate that inflation is better understood among the Dutch population. Using samples representative of the Dutch population, Van Rooij et al. (2012) and Wiersma et al. (2020) find that about 83 percent of respondents answer this question correctly.

The proportion of correct answers decreases substantially for the interest rate and risk diversification questions. Note that respondents were more likely to give incorrect answers to these questions and more often state that they did not know the answer. These questions are more complex than the inflation question but do not require any calculations. Thus, these are discouragingly low numbers, given that respondents did not have to make calculations but could merely select from a list of answers. Less than 59 percent of respondents can answer the interest question correctly, and 13.3 state they do not know the answer. Studies show that the fraction of correct answers for Suriname, Barbados, and the U.S. are 73, 68, and 72 percent, respectively (Lin et al., 2019, Beuermann et al., 2020; Arteaga Garavito et al., 2021). Regarding do not know answers, our findings are comparable to Barbados and the U.S. (11 and 13 percent). Thus, our sample underperforms on the interest question compared to the neighboring countries. This is worrisome; as we see below, more than one in five individuals in our sample have loans. Thus, understanding interest is essential.

The third question on risk diversification appears to be the most difficult to grasp. Less than half of the respondents (45.3%) answer this question correctly. In the S&P FinLit Survey, only 35 percent of adults can correctly answer the risk diversification question. Striking differences in the understanding of this concept are observed across major emerging and major advanced economies. Klapper et al. (2015) show that 64 percent of respondents in major advanced economies grasp this concept against 28 percent in major emerging economies. This might explain the significant disparities observed between The Netherlands versus the constituent countries Curaçao and Suriname. About 62 percent of adults in The Netherlands understand this topic, against 45 percent in Curaçao and Suriname. Klapper et al. (2015) show that individuals from countries with more exposure to the stock market have a better grasp of risk diversification. Therefore, it is not surprising that Curaçao, with a less developed financial market, performs worse when it comes to risk diversification than The Netherlands. However, it must be noted

that the percentage of do not know answers in The Netherlands is higher than in Curaçao (23.3 vs. 13.8%).

Following previous studies, a financial literacy index ranging from 0 to 3 is constructed based on the number of correct answers provided to the three financial questions correctly. The average score on the financial literacy index is 1.8. This is higher than Barbados (1.65) and the U.S. (1.73) but lower than Suriname (1.92) (Beuermannetaal., 2020; Arteaga Garavito et al., 2021). This higher score on the index might be attributed to the performance on the inflation question. Furthermore, following the literature, we define respondents who can correctly answer all three questions as financially literate. Based on this, about 27 percent are considered financially literate, less than one-third.

Turning to our findings on subjective financial literacy, interestingly, about 31 percent of respondents rated their understanding of financial matters as above average. However, of these individuals, only 37 percent have all three questions correct. This might suggest that some respondents are overconfident. On the other hand, while less than one-third rate their understanding as good, more than 60 percent of our respondents had two or more questions correct. This might also signal underconfidence. Neither under-confidence nor overconfidence are desirable as prior studies have shown that miscalibration of financial abilities can result in poor financial performance and less financial satisfaction (Babiarz & Robb, 2014; Robb et al., 2015; Wiersma, 2020). Peter et al. (2019) showed that people with mismatched levels of objective and subjective numeric ability self-report worse financial and medical outcomes. Overconfidence has also been associated with a reluctance to seek financial advice and the use of financial professionals (Kramer, 2016; Lewis, 2018). Financial advice-seeking has been linked to various positive financial behaviors, such as the accumulation of emergency funds and retirement planning (Marsden, Zick, & Mayer, 2011). The following sections discuss the correlation between financial literacy, financial behavior, and SAFL.

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Insert Table 1 about here  
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#### ***4.1.1 Who is financially illiterate?***

From a policy perspective, it is helpful to look at financial literacy among sub-groups to identify those who are potentially more financially fragile. Therefore, Table 2 tabulates the financial literacy questions, number of correct answers, and SAFL (only the good category) across gender, age, income, and educational attainment. Regarding gender, the present findings seem to be consistent with previous evidence on the gender gap in financial literacy. A large body of research across different countries shows that women routinely have lower financial literacy and are more likely to choose the "do not know" option than men (see, for example, Bucher-Koenen et al., 2017; Dinkova et al., 2021; Klapper et al.; 2015; Klapper et al., 2019; Lusardi & Tufano, 2015). These studies show that the gender gap is also

present in other domains of financial literacy, such as pension and debt literacy. Likewise, we observe that females in our sample perform worse than males on the financial literacy index and the individual questions. The observed differences are statistically significant at the five percent level. Bucher-Koenen et al. (2021) argue that two channels drive the gender gap in financial literacy. On the one hand, females have lower financial knowledge, giving fewer correct answers, and on the other hand, females have lower confidence. Thus, regarding financial literacy, females do indeed know less than males, but they know more than they think. Compared to global statistics, the gender gap in our sample for the inflation question and the number of do not know answers, and SAFL is slightly smaller. It is most prominent for the interest question, not the diversification question. The observed gender gap in both subjective and objective financial literacy is in accordance with the explanation of Bucher-Koenen et al. (2021) that both less knowledge and lower confidence play a role.

Turning to age, financial literacy is the lowest among the elder. Comparing our findings with Alessie et al. (2011) and Lusardi and Mitchell (2011), we observe a more evident age gradient in our sample for the individual questions and the financial literacy index than in The Netherlands and The United States. The observed age gradient is statistically significant at the one percent level. Similar to the findings of Dinkova et al. (2016), the inflation question is the only question where the older age group fares better than the 51-64 age group. According to the authors, a plausible explanation for this finding is that the older respondents may have lived in a time when the idea of inflation was more pervasive in daily life. Older individuals perform worse on the diversification question and more often choose the do not know option when it comes to the interest and diversification question. It seems that younger individuals are more likely to guess the answer as they do not use the do not know option. While older individuals score the lowest on the financial literacy index, they are more likely to rate their understanding of financial matters above average. Our findings are in line with Lusardi and Mitchell (2014) and Finke et al. (2017). They find that individuals' confidence in their financial knowledge increases while actual financial literacy falls with aging. This makes older individuals particularly prone to financial scams and fraud (Lusardi & Mitchell, 2014).

Generation effects might further explain lower literacy levels among the older age group. A study by Boyle et al. (2013) shows that lower financial literacy levels in older individuals (without dementia) can be attributed to early-life conditions (i.e., education) and late-life challenges such as cognitive decline. Moreover, older individuals may have been exposed to a lower quality of education or have fewer years of schooling. The summary statistics in Table A1 show that a relatively high proportion of our sample has up to the first level of secondary education. A cross-tabulation confirms that most individuals in this category are in the older age category. CBS Curaçao (2020) also shows that 67 percent of those employed and older than 65 have up to the first secondary education level. It must be noted that

in Table 2, no attempt can be made to distinguish between age and cohort effects due to the cross-sectional nature of our data.

Subsequently, we tabulate financial knowledge across the education categories. A glance reveals that financial literacy increases with educational attainment. Predominantly, individuals with primary education seem to score significantly lower on all financial literacy questions and are more likely to report not knowing the answer. For example, looking at the interest and diversification questions, a difference of almost 38 and 26 percent in reporting do not know is observed between the lowest and highest educational level. In our sample, a gap of about 22 percentage points separates adults with primary and tertiary education. Globally, this gap is approximately 15 percentage points.

The findings also reveal that confidence in financial knowledge (SAFL) increases with formal schooling. A sharp increment in self-reporting having good financial understanding is observed between secondary and college education. These findings on the differences in financial knowledge by educational attainment seem robust across countries (see Klapper & Lusardi 2019). However, even at the highest level of schooling, more than 35 percent answered the interest and diversification question incorrectly.

Turning to income, the findings point to a positive correlation between income and financial literacy. Higher-income individuals are more likely to answer the financial literacy questions correctly, especially the interest question. They are also more likely to perceive their financial knowledge as good. These findings substantiate Klapper et al. (2015), who find that financial literacy is higher among the wealthy.

Finally, the bivariate analyses reveal that individuals who assess their knowledge as good are more likely to score higher on the financial literacy questions. They are also less likely to say they do not know the answer. Those with lower subjective financial literacy appear to have more difficulty grasping the more difficult topics (interest and diversification). More than a 20 percent difference in correct answers is observed between those with high and low subjective financial literacy. In addition, those with lower subjective literacy more often choose the "do not know" option for these questions. Thus, individuals with lower subjective financial literacy seem to acknowledge their actual financial knowledge.

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Insert Table 2 about here  
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#### **4.1.2 Multivariate Analysis Financial Literacy**

Subsequently, we estimate OLS regressions with the Financial Literacy Index (the number of correct answers to the three financial literacy questions) and the number of do not know answers as the dependent variable. In addition, we run linear probability regressions with the correct answer to each question as dependent variables. Gender, educational attainment, age, net household income, and SAFL

are included as independent variables in these regressions.<sup>9</sup> The results are presented in Table 3. Notwithstanding the small number of observations that limit statistical power, we observe some noteworthy results.

First, a significant gender gap is observed for the interest question. The understanding of interest is significantly lower among females; the gender gap is approximately 16 percentage points.

Second, while the bivariate analysis points to an age gradient in financial literacy, this seems to disappear once we control for educational attainment. We still observe that the older age group is more likely to answer the diversification question incorrectly. These findings point to the presence of cohort effects. It might be that older individuals are received lower quality of education, are less educated, or have been less exposed to modern products. Individuals in the older category are also more like to use the do not know option than the younger individuals.

Like in the bivariate analyses presented in the previous subsection, we find that the financial literacy of respondents with elementary education is significantly lower than others. Higher-educated individuals perform significantly better on the financial literacy index and are less likely to choose the do not know option than lower-educated individuals. When regressing educational attainment on the probability of assessing one's financial knowledge as good, we observe that education positively and partially correlates to subjective financial literacy. Education is further associated with correctly answering the interest and diversification question. A gap of approximately 22-23 percent is observed between respondents with elementary and college or graduate education. Recall that these questions are where respondents score the lowest and are more difficult concepts to grasp. It can be noted that the education gradient is different for these questions. Regarding the interest question, those with lower educational attainment (especially those with only elementary education) are significantly less interest literate. While for the diversification question, more highly educated individuals are more literate. Finally, in line with prior literature, the regressions confirm the association between objective and subjective financial literacy.

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Insert Table 3 about here  
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## **4.2 Financial Behavior**

### **4.2.1 Descriptive Evidence: Savings and Investments**

Table A2 in the Appendix presents our descriptive findings on asset holdings. The results indicate that about 73 percent of respondents have a savings account at a financial institution. We also ask respondents

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<sup>9</sup> We also estimate regressions including labor market status, place of birth, and having received economics education in school as regressors. We further controlled for the presence of interviewer and language effects. However, the results were not significant and not presented for brevity. They are available upon request.

about their checking account ownership; about 90 percent of respondents report having one. Furthermore, approximately two-thirds (65.9%) were actively saving before the COVID-19 pandemic, and only 6 percent hold risky assets (bonds, stocks, mutual funds, or another investment product). Our findings on account ownership and saving behavior are roughly in line with the findings of the CBCS and CBS study (CBCS and CBS Curaçao, 2020). Compared to global statistics, account ownership is reasonably high in Curaçao. According to Demirgüç-Kunt et al. (2018), about 69 percent of adults worldwide have an account at a financial institution, which is lower in developing economies (63%). Furthermore, we observe that about 39 percent of our respondents own a credit card, and less than 10 percent report having credit card debt.

Turning to investments in risky assets, it is not surprising that less than one in fifteen partakes in such financial behaviors for several reasons. Firstly, the financial instrument market in Curaçao or the Dutch Caribbean, in general, is still emerging. For example, the first securities exchange, The Dutch Caribbean Securities Exchange (DCSX), which allowed listing and trading in domestic and international securities, was founded in 2009. Secondly, investing in global markets via international brokerage accounts is not feasible for many due to legal reasons. Lastly, banks on the islands offer portfolio and wealth management services; however, stringent initial capital is required. Thus, accessibility to these risky assets is limited.

Subsequently, Table 4 tabulates account ownership and saving behavior across the financial literacy variables and SAFL.<sup>10</sup> We see stark differences between those who know the most and those who know the least—similarly, those who assess their financial literacy as good versus below average. Concerning savings account ownership, a gap of approximately 33 percentage points is observed between financially literate and illiterate respondents. A gap is also observed between incorrect and correct answers for each question, which is the largest in the interest question (approximately 17%). Thus, objective and SAFL are correlated to saving behavior. Account owners seem more familiar with financial concepts and are more financially savvy.

#### **4.2.2 Descriptive Evidence: Debt holdings**

Table A2 in the Appendix presents the prevalence of each product among the respondents. We distinguish between formal and less formal methods of borrowing. The findings indicate that the most popular form of lending is via the bank, with more than one in five respondents having a bank loan. Borrowing from family, friends, or acquaintances (7.2%) and asking for salary advances (4.5%) are also less common among the respondents. This is in contrast with what we expected as Curacao, like other small-scale societies, is characterized by high levels of dependency on social networks (Curaçao

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<sup>10</sup> As investments in risky assets are low, for brevity we do not include them in the tabulations.

Government, migration survey 2014; CBS Curaçao, Social Cohesion Survey 2015). Therefore, one would expect higher levels of informal borrowing among friends and family. The Social Cohesion Survey (CBS Curaçao, 2015) provides a possible explanation for our findings. While there are positive views on neighborhood cohesion, high levels of social interaction among individuals, and agreements on matters involving solidarity, there is a low level of trust in others in the Curaçaoan population. Costa et al. (2001) argue that a certain degree of trust is necessary for cooperation. This might also explain why respondents do not necessarily resort to their employers for loans.

A noticeable fraction (16%) of respondents indicate having loans from credit institutions other than the bank or unregistered money lenders (loan sharks). This is concerning as, during the interview, respondents were given examples of local credit institutions which provide short-term loans at high-interest rates or payday loan providers. These loan providers have usurious interest rates and high credit costs. Previous research and reports have emphasized the high-volume usage of these lending methods and the lack of control over irresponsible lenders that provide these types of loans (voucher creditors, loan sharks, and payday loan providers) as a common reason why households in Curaçao face debt problems (Pau, 2020).

One in six respondents reported purchasing products on credit or using the voucher system. Similar to payday loans, these forms of credit often have unfavorable fees, terms, and conditions. Most of these loans are offered with an interest close or at the maximum Annual Percentage Rate (APR) of 27 percent, which the CBCS introduced in 2017 (CBCS, 2021). A study by Wever (2016) reveals that almost 41 percent of respondents perceive their income as insufficient to cover new furniture purchases without any problems. We observe that also in our sample, 27.9 percent report having either some or great trouble making ends meet.

Table 4 presents our findings on how debt holdings correlate to subjective and objective financial literacy. As we are interested in whether financial literacy is linked to (un)savvy financial behavior, and for brevity, we focus the discussion on informal/ riskier methods of borrowing. The results corroborate the findings of a great deal of the previous work on the correlation between debt behavior and financial literacy. Those with lower (self-assessed) financial literacy are more likely to hold riskier debts. Less (objective and subjective) financially literate individuals and those who indicate having below average understanding of financial matters more often purchase on credit or with a coupon and have loans from family or friends. Furthermore, concerning individuals who purchased on credit or used the voucher system have little understanding of the workings of interest. Unsophisticated borrowers are more vulnerable to exploitation by predatory lenders who can induce them to agree to disadvantageous loan contracts.



In sum, the findings on debt and asset holdings highlight the importance of interest literacy. While inflation and diversification literacy are also important, interest literacy seems to be the more prominent factor in saving and debt behavior.

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Insert Table 4 about here  
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#### **4.2.3 Multivariate Analysis Assets and Debt Holdings**

Having discussed the findings from the univariate analysis, we will now address the results of our linear probability models explaining assets and debt holdings.<sup>11</sup> The models consider educational attainment, gender, age, net household income, correct answers to each question, and SAFL. In the first model, we include only our control variables. In the second model, we introduce three dummy variables indicating whether a person had the correct answer to the interest, diversification, and interest question. In the last model, we introduce a dummy variable equal to one if a respondent assesses their knowledge as good and 0 otherwise. The results are presented in Table 5. We focus our discussion on savings account ownership, saving behavior, loans from family and friends, and purchasing on credit, as these produce interesting economic and statistically significant results.

Firstly, the findings indicate that education and subjective financial literacy are associated with savings account ownership and saving before the pandemic. Education is also negatively associated with borrowing from friends and family and purchasing on credit. Furthermore, financial literacy remains a predictor even after controlling for education. Hence, financial literacy has an independent impact on financial decision-making. This has also been observed in other financial behavior aspects. For example, Hasler et al. (2018) and Wiersma et al. (2020) find that the effect of financial literacy on financial fragility goes above and beyond that of education. As Lusardi and Mitchell (2014) argue, this indicates that general knowledge (education) and specialized knowledge (financial literacy) both contribute to more informed financial decision-making. In essence, the impact of financial knowledge goes above and beyond that of education, and investing in financial knowledge appears to be a particular type of human capital, as opposed to being merely linked to additional years of schooling.

Secondly, we observe that self-assessed financial literacy is a stronger predictor than the number of correct answers to the quiz-like questions. These results support previous evidence on the importance of self-assessed financial literacy (Allgood & Walstad, 2013; Anderson et al., 2017; Barrafreem et al., 2020; Wiersma et al., 2020). Aside from being a predictor of asset holdings, SAFL also seems to be (partially) correlated with the likelihood of holding riskier debt, such as purchasing on credit. Higher

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<sup>11</sup> We also estimated probit models. These models yield similar average marginal effects and are comparable in terms of statistical significance to those of linear probability models. The results are available upon request from the author.

subjective financial literacy is negatively associated with purchasing on credit. For buying on credit, we observe once more that education plays a role, but the impact diminishes when controlling for SAFL. These results indicate that one’s perception of knowledge might be as important as their actual knowledge regarding financial decisions. Thirdly, turning to the individual questions, we observe that the interest concept seems to be associated with having risky debts (purchasing on credit) and savings account ownership. The association remains significant when controlling for education, income, and self-assessed financial literacy.

Lastly, one caveat is that the small number of observations limits statistical power. Another caveat is that research shows that it is difficult to establish causality between financial literacy and behavior due to endogeneity. Theoretical reasoning may prefer a causal link from literacy to good behavior. However, there might be reverse causality, one of the three sources of endogeneity. Namely, financial literacy might improve financial decision-making; however, being involved in certain financial activities might lead to greater financial literacy. Endogeneity might also arise due to some third underlying factors (e.g., numerical or cognitive ability, interest in financial matters) that lead to higher literacy and better behavior.<sup>12</sup> Finally, financial literacy might also be measured with error. Our OLS models do not allow us to give causal interpretations in this analysis stage.

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Insert Table 5 about here  
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## 5. Sensitivity Analysis

The multivariate regressions discussed in the previous sections suggest that various factors are associated with subjective and objective financial literacy. Furthermore, both measures of financial literacy seem to be associated with (un)savvy financial behaviors. In particular, interest literacy and self-assessed financial literacy seem to be prominent factors. To investigate the robustness of these results, we extend our models in Table 3 by including labor market status, place of birth, household composition, and having received economics education in school as control variables. Evidence from the literature suggests that these factors might be related to financial literacy (Lusardi & Mitchell, 2014). However, the results show that the inclusion of these variables does not contribute to understanding the observed heterogeneity in financial literacy. Education, SAFL, and gender are prominent factors associated with interest and financial literacy. These models are not presented in the paper for brevity, but they are available upon

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<sup>12</sup> Evidence indicates that the effect financial literacy on stock market participation and retirement planning remains significant even after controlling for cognitive and numerical ability (Van Rooij et al., 2011b & Zheng et al., 2022). Thus, financial literacy affects financial behavior above and beyond the effect of cognition and the ability to perform calculations.

request. Nevertheless, the associations observed between our factors in Table 3 and financial literacy are robust to the inclusion of additional explanatory variables.

For another sensitivity analysis, we consider three alternative specifications for the models in Table 5, including proxies for procrastination, influence of social networks, and locus of control. Other personal character traits might moderate the relationship between financial literacy and saving and borrowing decisions. For example, research suggests that procrastination, defined as the tendency to delay difficult decisions or actions to perform, is linked to suboptimal financial decision-making.

Procrastination has been associated with inadequate savings, delaying or failing to plan for retirement, and ballooning credit card debt (Brown & Previtro, 2014; Nye & Hillyard, 2013). Brown and Previtro (2014) show that compared to non-procrastinator, procrastinators are less likely to participate in savings plans, take longer to sign up for 401(k) plans, contribute less to their defined contribution plans, tend to stick with default portfolio allocations, and are less likely to annuitize their defined benefit plan. We construct a crude proxy variable for procrastination using two questions from the telephone survey. Specifically, we asked respondents if they think it would be wise to lose some weight and whether they have tried to lose weight in the past year. The possible answers for the second question were: Yes, Yes, I have thought about it, but I have not yet taken any action, No, I have not tried, Refuse to answer, and Do not know. We classify respondents who want to lose weight and have taken action as non-procrastinators. Those who want to lose weight and have not taken action or did not try are procrastinators. Respondents who stated they did not need to lose weight are considered neutral individuals. Approximately 28 percent of respondents are procrastinators, 43.6 percent are neutral, and 28.4 percent are non-procrastinators. We include this measure in our models in Table 5. The results are presented in columns 1,3, 5, and 7 of Table 6. The results indicate that compared to non-procrastinator, procrastinators are more likely to ask family and friends for loans and less likely to purchase on credit. Even after controlling for procrastination, interest literacy and SAFL remain significantly associated with having a saving account and taking out risky debt. With the inclusion of procrastination in the models of purchased on credit, the size of the interest literacy and SAFL coefficient decrease by less than 0.4 percentage points.

People frequently base some of their financial decisions partly on what their main influence groups have done or what they find acceptable. For example, friends, family members, relatives, and co-workers can influence a person's financial decision based on their experiences or behaviors. Earlier work shows that peers can affect, for example, an individual's investment behavior (Rau, 2017), charitable giving (Lieber & Skimmyhorn, 2018), savings decisions (Beshears et al., 20115), and debt holdings (Georgarakos et al., 2014). The social network can also influence an individual's financial literacy (Lachance, 2014). The influence of the social network on financial literacy and financial behavior can create a spurious correlation between literacy and behavior driven by an omitted variable. Therefore, we

include a measure of social influence in our control variables to control for this. We create a dummy variable based on respondents' answers to the question: how acceptable is it for your best friends and family to buy nice things even if they have trouble making ends meet? The variable is equal to one if the respondents state that it is acceptable and 0 if they state it is not acceptable, neutral, refuse to answer, or do not know. We refer to this variable as a measure of overspending among friends and family. About 11 percent state that it is acceptable for family and friends to overspend. The results are reported in columns 2, 4, 6, and 8 of Table 6. We observe that if overspending is acceptable among friends and family, a respondent is 42 percentage points more likely to take on risky debt than respondents where overspending is not acceptable. These findings are in line with Pau (2020), who states that one of the reasons why households are over-indebted in Curaçao is due to the cultural and socially acceptable behavior and attitude towards debt. Once more, we observe that interest literacy and SAFL remain positively associated at the one percent level with saving account holdings and negatively associated with purchasing on credit after controlling for social influence. The size of the effect of interest literacy and SAFL decrease by less than 2.5 percentage points when this variable is considered. Thus, these findings seem to be robust to the inclusion of additional explanatory variables.

Subsequently, we examine whether the locus of control (LOC) may alter our findings reported in Table 5. LOC, a concept developed by Rotter (1966), describes how a person perceives the fundamental causes of the events in their life. LOC has two dimensions, namely internal and external. Individuals with internal LOC believe that the outcomes of their actions are contingent on what they do. In contrast, individuals with external LOC believe that the outcomes are contingent on events outside their control, such as fate or luck. According to the literature, internal LOC is positively associated with financial behavior, while external LOC is negatively associated with financial behavior (see Multu and Özer, 2022, for an overview). Therefore, we include a four-scale measure of internal and external locus of control with two items each, developed by Kovaleva (2012), in our specifications. However, the LOC of control was not significant in none of the models and hence, not reported for brevity.

In sum, the strongly significant interest literacy and SAFL coefficients have proven to be robust to the inclusion of additional explanatory variables. This again highlights the importance of interest literacy and subjective financial literacy in saving behavior and engaging in risky debts.

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Insert Table 6 about here  
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## 6. Conclusions and implications

In this paper, we set out to examine the objective and subjective financial literacy of the citizens of Curaçao. We further investigated the correlations between financial literacy measures and socioeconomic and demographic characteristics. Finally, we examined how various factors, including financial literacy, are associated with asset and debt holdings. In doing so, we can identify at-risk groups.

We find that less than one in three respondents in our sample show an understanding of basic financial concepts. Compared with global and neighboring islands, statistics indicate that Curaçao fares quite well regarding objective financial literacy. Nevertheless, taking a deeper dive into the individual concepts reveals that interest and diversification are poorly understood. Notably, the findings on the knowledge of interest are sobering, and our sample underperforms compared to the neighboring countries, the Netherlands, and global measures. Finally, a relatively small group assesses their knowledge of financial matters as good, and SAFL is associated with actual knowledge.

Who knows the least? Our analyses reveal that females, the lowly educated (especially those with elementary education), elders, and low-income individuals score lower on subjective and objective financial literacy levels. Regarding the interest question, those with elementary education and females are significantly less literate. This is concerning as this group is often the target of government programs to expand financial inclusion (Klapper & Lusardi, 2020). This can easily lead to high debt, mortgage defaults, or insolvency if people do not have the necessary financial skills. Indeed, we observe that almost one in five households in our sample take out risky debts while understanding of interest among this group is below average. As a result, these households face a greater risk of being over-indebted, as they do not possess the skills to assess and manage their debt holdings properly. These findings also support Pau (2020), who argues that many households in Curaçao face debt problems due to a lack of financial management skills.

Another point of concern is that our analysis of the linkages between financial products and financial literacy indicates that objective and subjective financial literacy are negatively and partially correlated to the usage of alternative financial services that often have unfavorable fees, terms, and conditions. On the other hand, savings account ownership is positively associated with objective financial and interest rate literacy. (Zheng, Gu, & van Soest, 2022). Thus, knowledge and confidence in one's ability are equally crucial in financial decisions. The result further highlights the importance of understanding interest in saving and debt decisions, a more specific form of financial knowledge. Moreover, although educational attainment is associated with financially savvy behavior, the multivariate analysis suggests that the impact of financial literacy goes above and beyond that of education. Thus, investing in financial knowledge appears to be a particular type of human capital. All these findings seem robust if one accounts for procrastination, peer effects, locus of control, and other explanatory variables.

These findings have some implications for policymakers and future research. While we find several sources of financial illiteracy, which can be challenging to address with one plan of action, the importance of financial literacy when it comes to financial behavior should be recognized. To ensure that individuals become more financially resilient, policymakers, financial service providers, and other stakeholders should focus on addressing gaps in financial knowledge. Attention should particularly be placed on the workings of interest. One potential approach to tackle financial illiteracy and suboptimal financial decision-making is through financial education, especially targeting those most at risk (however, more research is needed to establish causality). Financial education can serve as a tool to increase both objective and subjective financial literacy. Kaiser et al. (2022) find evidence for the positive effects of financial education on financial knowledge (and behaviors). They further find no evidence for a considerable decay in effects over time. By providing financial education in schools, policymakers can promote financial literacy among the young. In addition, financial literacy might be promoted to the older population through financial education in the workplace. Financial education programs at community centers (“Kas di Bario”) can target harder-to-reach groups. Individuals have different preferences and economic circumstances, so financial education programs should be tailored to the specific group’s needs.

Furthermore, as knowledge of interest is significantly lower among those with lower education and the high prevalence of dropouts in Curaçao, education needs to start as early as possible.<sup>13</sup> Future research can focus on taking a deeper dive into each group's specific needs and how to design these programs effectively. Finally, policymakers can follow examples from the mother country, The Netherlands (and other countries worldwide), in developing and implementing a national strategy for promoting financial literacy and good financial behavior. Organizations similar to The National Institute for Family Finance Information (Nibud), which provides advice on financial matters to households, can be established to improve financial knowledge further. Finally, a credit registration agency can aid in protecting households from over-crediting.

Our results also have some limitations. First, we are limited by our sample size. This makes it more challenging to estimate multivariate models with several independent variables. Furthermore, it is more difficult to establish causality. A larger sample size may produce different results. On a positive note, the Curaçao Biomedical Health and Research Institute have data on the original sample of households (n=2,900). Hence, in future research, or if this study were to be carried out again, the same households could be approached again. Second, we have self-reported data, which can be subject to recall bias. Third, we did not measure knowledge of interest compounding, an essential aspect of wealth

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<sup>13</sup> Dropout rates in Curaçao were around 36.2 percent in 2011. The percentage of dropouts is considered part of the population that does not have a graduation between the ages of 15 and 24. In 2013, the dropout rate in The Netherlands was 2.1 percent. See Revenberg (2015) for a more in-depth discussion.

building and understating how fast debt grows. Fourth, in line with Pau (2020), the sensitivity analyses revealed that socially/culturally acceptable irresponsible borrowing behavior is associated with the types of debt one holds. However, we use a crude measure for social influence. Future research may dive deeper into the determinants of financial behavior related to social influence and cultural norms. Curaçao is an ideal island to study the role of culture and social networks on financial literacy and -behavior because all inhabitants face the same institutions. Previous studies which investigate the role of culture on economic behavior mostly make cross-country comparisons. These studies suffer from the drawback that institutions (e.g., social security) differ across countries. Consequently, it is difficult to disentangle the effect of culture from that of country-specific institutions (Guin, 2017). Despite the limitations of this study, our findings still provide interesting insights into financial literacy and financial behavior in Curaçao. They may serve as a starting point for future research by academics and policymakers to identify possible solutions.

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## Tables

**Table 1. Summary Statistics Subjective and Objective Financial Literacy in percentages (Correct answers are in bold)**

<i>Interest: You borrow NAf. 100, and you need to pay it with interest within a year. Which is more to pay back: NAf. 105 or NAf. 100 plus 3% interest?</i>			
<b>NAf. 105</b>	NAf. 100 plus 3% interest?		Don't Know/ Refusal
58.7	28		13.3
<i>Inflation: Suppose over the next 10 years the prices double, and your income also doubles. Will you be able to buy more, less, or the same?</i>			
Less	<b>The same</b>	More	Don't Know/ Refusal
16.9	76	4	3.1
<i>Risk diversification: What do you think is safer: investing in 1 business or multiple businesses?</i>			
One business	<b>Multiple businesses</b>		Don't Know/ Refusal
40.9	45.3		13.8
<b>Objective Financial Literacy</b>	Shares of correct answers	0	10.7
		1	25.8
	Mean= 1.8	2	36.4
		3	27.1
<b>Subjective Financial Literacy</b>		Not that good	11.1
		Average	58.2
		Good	30.7

**Table 2. (Self-Assessed) Financial Literacy across socioeconomic and demographic characteristics**

	N	Interest Correct	Interest DK <sup>2</sup>	Inflation Correct	Inflation D.K.	Diversification Correct	Diversification D.K.	No. D.K.	Financial Literacy Index <sup>1</sup>	SAFL-good
<b>Gender</b>										
Male	96	67.71	8.33	77.08	2.08	50	12.5	0.23	1.95	31.25
Female	128	52.34	17.19	75	3.91	42.19	14.84	0.36	1.7	30.47
Total	224	58.93	13.39	75.89	3.13	45.54	13.84	0.3	1.8	30.8
<b>Age</b>										
18-34	23	60.87	0	82.61	0	52.17	0	0	1.96	26.09
35-50	53	62.26	1.89	79.25	1.89	62.26	1.89	0.06	2.04	30.19
51-64	73	63.01	8.22	68.49	4.11	46.58	13.7	0.26	1.78	34.25
Older than 65	74	50	31.08	78.38	4.05	31.08	25.68	0.61	1.59	29.73
Total	223	58.3	13.45	75.78	3.14	45.74	13.45	0.3	1.8	30.94
<b>Educational Attainment</b>										
Elementary school or Pre-Vocational & Don't Know	42	35.71	40.48	64.29	11.9	28.57	28.57	0.81	1.29	19.05
Secondary Education, first level	62	61.29	9.68	75.81	1.61	37.1	14.52	0.26	1.74	27.42
Secondary Education, second level	81	65.43	7.41	79.01	1.23	51.85	11.11	0.2	1.96	25.93
Higher Vocational or University Education (HBO or W.O.)	40	65	2.5	82.5	0	62.5	2.5	0.05	2.1	57.5
Total	225	58.67	13.33	76	3.11	45.33	13.78	0.3	1.8	30.67
<b>Net Household Income<sup>3</sup></b>										
< Naf. 2000	112	58.04	19.64	75	4.46	38.39	16.96	0.41	1.71	25.89
Naf 2001-3000	48	50	12.5	64.58	4.17	43.75	14.58	0.31	1.58	25
Naf 3001- 5000	45	57.78	4.44	86.67	0	60	11.11	0.16	2.04	31.11
> Naf. 5000	20	85	0	85	0	55	0	0	2.25	70
Total	225	58.67	13.33	76	3.11	45.33	13.78	0.3	1.8	30.67
<b>Amount of Financial Education in School</b>										
A lot & A little	73	67.12	2.74	83.56	0	53.42	4.11	0.07	2.04	57.53
Hardly anything & N/A	151	54.97	18.54	72.19	4.64	41.06	18.54	0.42	1.68	17.88
Total	224	58.93	13.39	75.89	3.13	45.09	13.84	0.3	1.8	30.8
<b>Person doing the household finances</b>										
Myself	117	59.83	16.24	69.23	4.27	41.03	16.24	0.37	1.7	35.04
Someone else	55	58.18	9.09	80	1.82	47.27	7.27	0.18	1.85	23.64
Me with someone else	50	60	12	88	2	52	16	0.3	2	30
Total	222	59.46	13.51	76.13	3.15	45.05	13.96	0.31	1.81	31.08
<b>Self- Assessed Financial Literacy</b>										
Good	69	71.01	2.9	75.36	0	52.17	5.8	0.09	1.99	
Average	131	56.49	15.27	77.1	2.29	44.27	12.21	0.3	1.78	
Not that Good	25	36	32	72	16	32	44	0.92	1.4	
Total	225	58.67	13.33	76	3.11	45.33	13.78	0.3	1.8	

**Notes:** The financial literacy index is the average number of correct answers. 2. D.K. stands for do not know answers. 3. Naf. Stands for Netherlands Antillean guilder. The average Euro to Naf. exchange rate in 2020 was 1 EUR= 2.0306 Naf. The average Dollar to Naf. exchange rate in 2020 was 1 USD= 1.7776. Naf. N/A stands for not applicable. The net household income category below Naf. 2,000 includes do not know answers.

Asterisks indicate that the observed differences are significant. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 3. OLS and linear probability regressions explaining (self-assessed) financial literacy and correct answer to individual questions**

Variables	Dependent Variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Financial Literacy Index	Financial Literacy Index	Inflation Correct	Inflation Correct	Interest Correct	Interest Correct	Diversification Correct	Diversification Correct	SAFL= good	Number of Don't Knows	Number of Don't Knows
Female		-0.187 (0.124)	-0.189 (0.122)	1.089 (6.070)	1.411 (6.052)	-15.895** (6.693)	-16.206** (6.637)	-3.921 (6.783)	-4.072 (6.827)	4.586 (6.241)	0.095 (0.077)	0.095 (0.072)
<i>Age (Reference= Younger than 35)</i>												
35-50		0.051 (0.223)	0.075 (0.224)	1.968 (9.593)	2.664 (9.574)	-0.806 (11.683)	0.480 (11.516)	3.975 (12.106)	4.356 (12.278)	1.562 (11.007)	0.094 (0.060)	0.042 (0.082)
51-64		-0.158 (0.202)	-0.177 (0.204)	-10.994 (9.477)	-11.171 (9.306)	3.354 (10.669)	2.081 (10.466)	-8.206 (11.254)	-8.645 (11.393)	3.646 (10.137)	0.275*** (0.083)	0.312*** (0.086)
Older than 65		-0.279 (0.202)	-0.262 (0.205)	2.244 (9.674)	2.831 (9.578)	-6.384 (10.875)	-5.476 (10.677)	-23.787** (11.218)	-23.530** (11.407)	2.079 (10.429)	0.521*** (0.094)	0.482*** (0.097)
<i>Educational Level (Reference= Elementary or pre-vocational education &amp; do not know)</i>												
Secondary Education, first level		0.381* (0.199)	0.376* (0.195)	11.346 (9.710)	11.681 (9.697)	26.252*** (9.970)	25.609*** (9.845)	0.543 (9.576)	0.270 (9.558)	6.133 (9.144)	-0.430** (0.176)	-0.423*** (0.155)
Secondary Education, second level		0.536*** (0.187)	0.516*** (0.185)	13.981 (9.265)	13.941 (9.196)	27.414*** (9.490)	26.010*** (9.334)	12.193 (9.419)	11.691 (9.546)	5.582 (8.579)	-0.432*** (0.159)	-0.395*** (0.138)
College or graduate education		0.592** (0.248)	0.545** (0.250)	14.061 (9.970)	15.286 (9.980)	23.024* (12.451)	18.754 (12.752)	22.159* (12.204)	20.468 (12.438)	30.622*** (11.271)	-0.586*** (0.164)	-0.511*** (0.147)
<i>Net Monthly Household Income (in Naf.) (Reference= &lt; Naf. 2,000)</i>												
Naf 2001-3000		-0.250 (0.162)	-0.247 (0.163)	-9.395 (8.334)	-9.484 (8.335)	-13.573 (8.425)	-13.253 (8.481)	-2.056 (8.077)	-1.929 (8.115)	-2.263 (7.488)	0.037 (0.103)	0.031 (0.097)
Naf 3001- 5000		0.123 (0.170)	0.098 (0.169)	9.837 (7.104)	9.083 (7.297)	-10.013 (9.608)	-11.364 (9.402)	12.493 (9.366)	12.095 (9.361)	-1.869 (8.872)	-0.056 (0.089)	-0.001 (0.088)
> Naf. 5000		0.250 (0.240)	0.201 (0.243)	8.858 (10.275)	10.133 (10.418)	13.474 (11.805)	9.052 (12.317)	2.666 (13.817)	0.914 (14.311)	31.771** (12.369)	-0.148* (0.078)	-0.070 (0.086)
<i>Self-Assessed Financial Literacy (Reference= Good)</i>												
Average			-0.391* (0.221)		-1.749 (10.748)		-27.602** (11.584)		-9.765 (11.400)			0.751*** (0.199)
Not that good			-0.107 (0.144)		5.163 (6.827)		-11.183 (7.023)		-4.665 (7.724)			0.143** (0.063)
Constant		1.648*** (0.258)	1.774*** (0.279)	66.211*** (12.077)	62.665*** (13.339)	51.816*** (13.276)	63.360*** (13.928)	46.812*** (13.526)	51.412*** (15.164)	14.838 (12.481)	0.358** (0.159)	0.161 (0.152)
N		224	224	224	224	224	224	224	224	224	224	224
R <sup>2</sup>		0.129	0.141	0.062	0.066	0.105	0.129	0.110	0.113	0.116	0.244	0.344

Notes: The financial literacy index indicates the number of correct answers. The dependent variables in models 3 to 8 is a dummy equal to one if the respondent correctly answered the question and zero otherwise. In model 9, the dependent variable is equal to 1 if the respondent assessed their financial knowledge as good and 0 otherwise. The dependent variable in models 10 and 11 is the number of do not know answers. The coefficients in models 3 to 9 are multiplied by 100 and can thus be interpreted as percentages. Naf. Stands for Netherlands Antillean guilder. The average Euro to Naf. exchange rate in 2020 was 1 EUR= 2.0306 Naf. The average Dollar to Naf. exchange rate in 2020 was 1 USD= 1.7776. The net household income category below Naf. 2,000 includes do not know answers. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4. Tabulation of asset and debt holdings across subjective and objective financial literacy**

	N	Checking account	Savings account	Saved before COVID-19	Loan from family and friends	Purchased on credit
<b>Financial Literacy Index (no. correct answers)</b>						
None	24	82.61	54.17	54.17	16.67	8.00
1 correct	58	91.23	75.93	68.97	7.02	21.00
2 correct	82	84.15	65.00	64.63	7.32	20.00
3 correct	61	100	87.93	69.49	3.39	10.00
<b>Inflation Correct</b>						
No	54	83.02	68.52	61.11	12.96	11.00
Yes	171	92.26	74.07	67.46	5.36	18.00
<b>Interest Correct</b>						
No	93	85.71	62.92	62.37	8.70	24.00
Yes	132	93.08	79.53	68.46	6.15	11.00
<b>Diversification Correct</b>						
No	123	89.26	68.38	65.85	9.02	15.00
Yes	102	91	77.78	66.00	5.00	18.00
<b>Self- Assessed Financial Literacy= good</b>						
No	156	86.18	65.31	59.74	8.50	20.00
Yes	69	98.55	88.41	79.71	4.35	7.00

*Notes:* Purchased on credit consists of buying something via the coupon/voucher system (The "bòn" system) and purchasing anything on credit.

**Table 5. Linear probability regressions explaining asset and debt holdings**

Independent Variables:	Dependent Variable:	(1) Savings account	(2) Savings account	(3) Savings account	(4) Saved before COVID-19	(5) Saved before COVID-19	(6) Saved before COVID-19	(7) Purchased on credit	(8) Purchased on credit	(9) Purchased on credit	(10) Loans from family and friends	(11) Loans from family and friends	(12) Loans from family and friends
Female		-0.541 (6.210)	1.775 (6.258)	0.553 (6.188)	-0.507 (6.774)	-1.048 (6.780)	-2.070 (6.750)	-2.570 (5.416)	-4.941 (5.384)	-4.266 (5.389)	-4.619 (3.730)	-4.615 (3.732)	-4.537 (3.779)
Age (Reference= Younger than 35)													
35-50		4.479 (10.691)	4.992 (10.632)	4.369 (10.385)	-3.438 (10.887)	-3.341 (10.984)	-3.771 (11.017)	7.791 (9.512)	7.215 (9.206)	7.499 (9.164)	-12.704 (7.715)	-12.584 (7.697)	-12.551 (7.771)
51-64		-4.762 (10.470)	-5.381 (10.480)	-5.863 (10.133)	-7.021 (10.449)	-7.366 (10.657)	-7.747 (10.752)	-1.015 (8.714)	0.827 (8.453)	1.078 (8.399)	-13.840* (7.315)	-14.677** (7.416)	-14.648* (7.468)
Older than 65		4.124 (10.329)	5.354 (10.532)	4.525 (10.248)	-10.365 (10.577)	-12.229 (10.714)	-12.748 (10.794)	-5.645 (8.298)	-5.589 (8.254)	-5.247 (8.211)	-8.412 (7.851)	-8.750 (7.824)	-8.708 (7.900)
Educational Level (Reference= Elementary or pre-vocational education & do not know)													
Secondary Education, first level		3.700 (10.549)	0.302 (10.506)	0.030 (10.414)	28.336*** (10.377)	28.408*** (10.473)	27.844*** (10.282)	-3.784 (7.876)	-0.706 (8.170)	-0.334 (8.046)	-4.593 (6.449)	-4.011 (6.538)	-3.968 (6.525)
Secondary Education, second level		9.552 (9.827)	5.751 (9.683)	5.538 (9.638)	23.236** (9.996)	24.156** (10.013)	23.733** (9.873)	-5.713 (7.617)	-3.273 (7.978)	-2.994 (7.862)	-6.258 (6.393)	-5.278 (6.395)	-5.242 (6.385)
College or graduate education		24.392** (9.725)	21.058** (9.800)	16.763* (9.890)	35.396*** (11.073)	37.012*** (11.382)	33.017*** (11.559)	-19.858** (9.365)	-18.600** (9.353)	-15.964* (9.140)	-10.845* (5.593)	-9.629* (5.507)	-9.328* (5.464)
Net Monthly Household Income (in Naf.) (Reference= < Naf. 2,000)													
Naf 2001-3000		-6.388 (8.712)	-4.332 (8.824)	-4.186 (8.832)	-10.907 (8.518)	-10.961 (8.558)	-10.710 (8.480)	6.783 (6.424)	5.602 (6.360)	5.437 (6.270)	7.518 (5.693)	6.996 (5.800)	6.976 (5.796)
Naf 3001- 5000		9.753 (7.577)	11.294 (7.580)	11.475 (7.400)	0.624 (8.474)	1.304 (8.555)	1.431 (8.585)	17.167** (7.951)	14.208* (7.999)	14.125* (7.965)	-3.469 (3.492)	-2.552 (3.660)	-2.563 (3.662)
> Naf. 5000		11.771 (9.058)	10.117 (8.765)	5.164 (9.376)	14.237 (9.777)	14.477 (9.685)	10.208 (9.632)	10.125 (9.726)	11.377 (8.991)	14.194 (9.202)	-3.342 (3.150)	-2.762 (3.332)	-2.444 (3.819)
Financial Literacy Measures:													
Inflation Correct			-2.593 (7.264)	-1.699 (7.210)		1.933 (7.882)	2.865 (7.879)		8.187 (5.558)	7.572 (5.513)		-6.016 (4.836)	-6.084 (4.878)
Interest Correct			14.099** (6.832)	11.951* (6.838)		-1.153 (6.637)	-2.939 (6.803)		-15.444*** (5.925)	-14.266** (6.012)		0.309 (3.576)	0.440 (3.550)
Diversification Correct			1.656 (6.541)	1.248 (6.417)		-7.391 (6.455)	-7.814 (6.432)		5.137 (5.547)	5.416 (5.517)		-2.056 (3.410)	-2.025 (3.373)
Self- Assessed Financial Literacy= good				16.549*** (5.955)			14.201** (6.989)			-9.374** (4.272)			-1.061 (3.472)
Constant		61.839*** (12.889)	55.414*** (14.135)	53.489*** (13.919)	51.581*** (12.595)	54.370*** (13.966)	52.787*** (14.299)	18.673* (10.411)	18.860* (10.780)	19.905* (10.734)	24.683** (9.582)	29.484*** (10.512)	29.600*** (10.526)
N		215	215	215	222	222	222	222	222	222	221	221	221
R <sup>2</sup>		0.078	0.101	0.127	0.102	0.108	0.125	0.062	0.105	0.117	0.086	0.097	0.098

**Notes:** The dependent variables are dummy variables equal to one if the respondent report having the asset/debt/using the product and zero otherwise. The coefficients are multiplied by 100 and can thus be interpreted as percentages. Naf. Stands for Netherlands Antillean guilder. The average Euro to Naf. exchange rate in 2020 was 1 EUR= 2.0306 Naf. The average Dollar to Naf. exchange rate in 2020 was 1 USD= 1.7776. The net household income category below Naf. 2,000 includes do not know answers. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 6. Sensitivity Analysis: Linear Probability regressions explaining asset and debt holdings**

Independent Variables:	Dependent Variable:	(1) Savings account	(2) Savings account	(3) Saved before COVID-19	(4) Saved before COVID-19	(5) Purchased on credit	(6) Purchased on credit	(7) Loans from family and friends	(8) Loans from family and friends
Female		0.402 -6.211	0.865 -6.221	-2.526 -6.764	-2.079 -6.772	-4.144 -5.447	-3.558 -4.814	-4.677 -3.737	-4.546 -3.803
Age ( <i>Reference= Younger than 35</i> )									
35-50		3.815 -10.418	1.429 -10.529	-4.247 -11.131	-3.684 -11.127	6.854 -9.115	0.455 -8.734	-12.03 -7.653	-12.455 -7.622
51-64		-6.333 -10.275	-8.724 -10.191	-7.712 -10.996	-7.662 -10.874	-0.256 -8.293	-5.839 -7.803	-13.427* -7.287	-14.554* -7.558
Older than 65		5.199 -10.219	2.668 -10.225	-12.171 -10.872	-12.695 -10.854	-3.928 -8.012	-9.506 -8.003	-9.73 -7.856	-8.649 -7.923
Educational Level ( <i>Reference= Elementary or pre-vocational education &amp; do not know</i> )									
Secondary Education, first level		0.845 -10.552	0.144 -10.343	28.249*** -10.319	27.843*** -10.306	1.091 -7.884	-0.237 -7.575	-5.151 -6.58	-3.968 -6.54
Secondary Education, second level		5.032 -9.776	3.371 -9.628	22.780** -9.834	23.798** -10.07	-3.237 -7.793	-8.297 -7.716	-5.039 -6.275	-5.167 -6.377
College or graduate education		17.325* -10.045	17.277* -9.792	33.926*** -11.455	33.003*** -11.576	-15.988* -8.978	-14.836* -7.819	-9.115* -5.297	-9.342* -5.496
Net Monthly Household Income (in Naf.) ( <i>Reference= &lt; Naf. 2,000</i> )									
Naf 2001-3000		-5.172 -8.93	-5.177 -8.786	-12.391 -8.527	-10.681 -8.508	5.22 -6.342	3.118 -5.652	6.905 -5.82	7.007 -5.885
Naf 3001- 5000		10.936 -7.427	10.554 -7.359	0.598 -8.582	1.46 -8.553	13.712* -7.979	11.775 -7.503	-2.353 -3.655	-2.532 -3.718
> Naf. 5000		3.659 -9.519	6.177 -9.354	7.693 -9.65	10.179 -9.805	13.504 -9.539	16.616** -8.195	-2.186 -4.006	-2.477 -3.866
<i>Financial Literacy Measures:</i>									
Inflation Correct		-2.041 -7.261	-2.664 -7.19	3.038 -7.913	2.891 -7.936	6.506 -5.421	5.383 -5.18	-5.072 -4.807	-6.054 -4.996
Interest Correct		13.050* -6.864	12.974* -6.843	-0.9 -6.886	-2.97 -6.907	-13.994** -6.065	-11.733** -5.528	0.424 -3.545	0.405 -3.482
Diversification Correct		0.834 -6.361	0.175 -6.387	-9.016 -6.464	-7.781 -6.404	5.97 -5.538	2.712 -5.073	-2.709 -3.375	-1.988 -3.298
Self- Assessed Financial Literacy= good		16.228*** -6.034	15.603*** -5.967	12.783* -7.095	14.231** -7.019	-8.327* -4.495	-11.806*** -4.211	-2.219 -3.394	-1.028 -3.572
Procrastination ( <i>Reference= Not a Procrastinator</i> )									
Procrastinator		-8.37 -8.179		-14.960* -8.398		-1.91 -7.694		-0.362 -3.461	
Neutral		-6.001 -7.237		-4.74 -7.632		-10.305* -6.169		8.587** -4.302	
Social Network Influence ( <i>Reference= Overspending is not acceptable for majority of family and friends</i> )									
Overspending is acceptable for the majority of family and friends			17.306** -7.505		-0.519 -11.133		42.324*** -10.41		-0.576 -4.834
Constant		58.760*** -15.001	55.444*** -13.819	59.717*** -15.489	52.729*** -14.303	24.922** -12.321	24.678** -9.709	26.005** -10.33	29.534*** -10.617
N		215	215	222	222	222	222	221	221
R <sup>2</sup>		0.132	0.141	0.138	0.125	0.132	0.234	0.124	0.098

**Notes:** The dependent variables are dummy variables equal to one if the respondent report having the asset/debt/using the product and zero otherwise. The coefficients are multiplied by 100 and can thus be interpreted as percentages. Naf. Stands for Netherlands Antillean guilder. The average Euro to Naf. exchange rate in 2020 was 1 EUR= 2.0306 Naf. The average Dollar to Naf. exchange rate in 2020 was 1 USD= 1.7776. The net household income category below Naf. 2,000 includes do not know answers. Robust standard errors are reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



# Appendix

## A1. Wording of the asset and debt holdings questions

1. **Asset holdings: *Do you or a member of your household have any of the following?*** Yes/ No/ Do not know/ Refuse to answer.
  - a. Checking Account (*Explanation given if needed:* (or current accounts) are private accounts with a bank to which, for example, your salary or benefits payment is transferred and from which you can make payments. If you have a checking account that you mainly use for saving, please consider this account to be a savings account)
  - b. Savings Account (*Explanation given if needed:* an account where consumers can store money in order to earn interest.)
  - c. Credit Card ( not a money card / prepaid credit card, e.g., Kompa Leon or a Moneycard) (*Explanation given if needed:* is a type of card which can be used to make payments in stores or online and the charges are made against a line of credit (the money is
  - d. Stocks, bonds, mutual funds, or other securities
  
2. **Debt holdings: *Before the Corona crisis, did you have any of the following?*** Yes/ No/ Do not know/ Refuse to answer.
  - a. A loan at a bank (e.g., MCB, Girobank, RBC)
  - b. A loan from a credit institution other than the bank (e.g., Caribbean Cash, Shon Fia, Island Finance) or an unregistered money lender
  - c. (if they report having a credit card) Credit card debt (that is, have you been overdrawn for more than a month?)
  - d. Loans from family, friends, or acquaintances
  - e. A salary advance/loan from your employer
  - f. Bought something on the receipt (The "bòn" system (voucher), e.g..Bòn di Enca, Polonius, Pieterz)
  - g. Purchased furniture or electronics on credit? (INT explanation: which you have to pay off monthly?)
  
3. **Making ends meet: *Before the Corona crisis, did you (your family) have any trouble living on your household income?*** No, no trouble/ No, no trouble, but you have to pay attention to your expenses or expenditures/ Yes, some trouble/ Yes, great trouble/ Do not know/ Refuse to answer.
  
4. ***Did you save money in the months before the Corona crisis?*** Yes/ No/ Do not know/ Refuse to answer.

## Appendix B. Additional Tables

**Table A1. Summary statistics**

Characteristics		%
Total Sample N		225
Gender	Male	42.9
	Female	57.1
Age	18-34	9.8
	35-50	23.1
	51-64	29.8
	Older than 65	37.3
Educational Attainment	Elementary school or Pre-Vocational	17.8
	Secondary Education, first level	27.6
	Secondary Education, second level	36
	Higher Vocational or University Education (HBO or W.O.)	17.8
	Don't Know	0.9
Employment Status	(Self-) Employed	47.1
	Retired	34.2
	Unemployed, looking for work	6.7
	Economically not active <sup>3</sup>	4.9
	Student	3.1
	Other	4.0
Net Monthly Household Income	< Naf. 2000	35.1
	Naf 2001-3000	21.3
	Naf 3001- 5000	20.0
	> Naf. 5000	8.89
	Refusal/ Don't know	14.7
Place of Birth	Curaçao	83.0
	(Old) Netherlands Antilles <sup>1</sup>	4.0
	Netherlands	1.8
	Latin America <sup>2</sup>	7.6
	Other	3.6
Household Composition	Single	21.1
	Couple without kids	16.6
	Couple with kids	21.1
	Single parent living independent	17.5
	Single parent living at or with parents	4.0
	Other	19.7

Notes: 1. (Old) Netherlands Antilles includes Aruba, Bonaire, Saba, Sint Eustatius and Sint Maarten. 2. Latin America includes Colombia, Suriname, Venezuela, and the Dominican Republic. 3. Economically not active includes those who are permanently incapacitated to work, individuals who receive social security, and homemakers. Naf. stands for Netherlands Antillean guilder. The average Euro to Naf. exchange rate in 2020 was 1 EUR= 2.0306 Naf. The average Dollar to Naf. exchange rate in 2020 was 1 USD= 1.7776.

**Table A2. Financial behavior measures across respondents**

	%
Checking account	90.1
Savings account	72.7
Saved before COVID-19	66.0
Risky assets	6.4
Credit card ownership	39.0
Credit card debt	9.77
Loan from a bank	22.1
Loan from an institution other than the bank	15.8
Loan from family and friends	7.2
Purchased on credit	16.0
Some or great trouble living of income	27.9

**Notes:** The results are based on 225 observations. Purchased on credit consists of buying something via the coupon/voucher system (The "bòn" system) and purchasing anything on credit.