Politecnico di Torino

Politecnico di Torino

Master of Science in Engineering and Management

A.Y. 2023/2024

July 2024

Financial Education Programs in Italy

A Critical Review and Analysis of Current Programs, Major Initiatives and Case Studies on Children's Financial Knowledge, Gender Differences and Online Decision-Making Among Experts

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To my parents,

For their unconditional support and encouragement.

Abstract

This thesis titled “Financial Education Programs in Italy: A Critical Review and Analysis of Current Programs, Major Initiatives, and Case Studies on Children’s Financial Knowledge, Gender Differences and Online Decision-Making Among Experts” provides an in-depth examination of the state of financial literacy in Italy, positioning it within a global context. The primary objective is to exhaustively review the financial education initiatives currently implemented across Italy by the government, private sector, and non-profit organizations, identifying their strengths and weaknesses for each initiative.

The research presents several case studies to assess the impact of financial education projects. One case study focuses on a school-based project aimed at elementary school children, analyzing its influence on their financial knowledge and behaviors towards money. Another experimental study explores how contemporary online environments affect individuals with advanced financial expertise. Additionally, the thesis investigates an initiative examining gender differences in learning financial basics, highlighting distinct learning patterns and behavioral impacts between boys and girls.

The findings from the first case study reveal that the school-based project positively influenced participants by increasing their interest in economics and reinforcing attitudes towards using money for altruistic purposes. While these effects are modest, they represent potential long-term benefits. The second case study emphasizes the importance of systematically implementing controlled experiments to evaluate the effectiveness of financial education interventions, noting the need for a deeper understanding of human behavior in designing such programs. The third case study suggests that financial literacy programs may need to be gender-differentiated or restructured to be effective for both genders, proposing further research on gender differences in financial education.

The thesis concludes emphasizing the importance of targeted, behaviorally informed, and continuously evaluated financial education programs. The recommendations aim to encourage future efforts in designing and implementing effective financial education programs, ultimately contributing to a more financially literate and economically stable society.

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1. Introduction

The interest in financial education programs primarily arises from the concern about whether individuals possess adequate knowledge and skills to manage their financial well-being effectively. Especially as the responsibility for saving and preparing for retirement has increasingly shifted to individuals in modern economies.

However, this concern is not the sole rationale. Financial education is crucial nowadays for a variety of factors. Several of these will be analyzed throughout the introduction chapter.

1.1 Background and Rationale for Studying Financial Education Programs

The significance of financial education cannot be overstated in today's rapidly evolving global economy, characterized by increasingly sophisticated financial systems and dynamic markets. Financial education is not merely about understanding basic financial and economic principles, but it includes a broader set of skills and behaviors vital for navigating the complexities of modern finance.

A higher level of financial literacy empowers individuals to make informed decisions that affect their financial well-being, from budgeting and saving to investing and retirement planning. Nonetheless, despite the growing recognition of its importance, many individuals still lack the necessary knowledge and skills to adequately manage their finances.

A proper level of financial education is essential for enabling people to face the world of finance with confidence and competence. In an era where personal financial decisions carry considerable repercussions for long-term financial stability, the need for financial literacy has never been greater.

It can equip individuals with the knowledge and skills required to make informed decisions at every stage of their lives, from managing debt and understanding investment alternatives to planning for retirement and protecting against financial risks.

The importance of financial literacy has become even more pronounced due to various factors. Firstly, changing welfare systems and increased life expectancy have placed complex choices, such as opting for private pension funds, in the hands of ordinary people, who may not always have the necessary knowledge and awareness to make this important choice.

Additionally, with the advent of digital finance (which, with the help of technology, one can access with a click), new ways to make payments ("buy now, pay later"), and increasingly complex financial products, the importance of financial literacy expands its scope and faces new challenges (think about the boom in popularity of some risky instruments as cryptocurrencies, with Bitcoin being one of the most important examples).

By promoting financial education, societies can encourage a culture of financial responsibility and resilience, contributing to overall economic well-being.

The widespread disparity in financial knowledge not only negatively impacts individuals' capacity to maximize their resources but also aggravates macroeconomic challenges. Recent economic downturns arising from events like the subprime mortgage crisis and the COVID-19 pandemic illustrate how the combination of indebtedness and individuals' insufficient financial safety nets can impact the broader economy.

Moreover, extensive literature on financial education has shed light on its significance in improving financial decision-making. Financial literacy tends to increase with GDP per capita and education levels, but it also rises with age (although decreasing later in life in some countries), and men tend to be more financially literate than women.

Furthermore, studies have established a causal effect between financial knowledge and outcomes. Individuals with greater financial knowledge are better equipped to manage both assets and liabilities effectively, leading to lower financial fragility and higher wealth accumulation.

Better financial knowledge also enables individuals to plan more wisely for retirement, participate more actively in financial markets, and avoid over-indebtedness.

Therefore, the role played by financial literacy is pivotal in personal financial management, influencing the ability of individuals to achieve their financial goals.

Studies have consistently shown that people with higher levels of financial competencies tend to make better financial decisions, leading to improved financial outcomes and greater financial security. For example, individuals who register a good financial literacy level are more likely to effectively manage debt, build savings, and invest wisely, and by doing so, reducing financial stress, and improving their overall quality of life.

While the importance of financial education is widely recognized, there remains a pressing need for empirical research to assess the effectiveness of existing financial education programs and identify areas for improvement.

By rigorously evaluating the impact of financial education initiatives on individuals' financial skills and behaviors, researchers can provide insights into the most effective strategies for promoting financial education.

Moreover, by advancing our understanding of the factors influencing financial literacy levels and the outcomes of financial education initiatives, empirical research can influence the development of evidence-based policies and practices.

Despite ongoing efforts to promote financial literacy, there are persistent gaps and shortcomings in the existing literature. There is a need for more research on the long-term effects of financial education interventions and their impact on individuals' financial behaviors and outcomes. Also, there is a lack of consensus on the most effective educational approaches for improving financial literacy, with some studies suggesting that traditional classroom-based instruction may be less effective than experiential learning approaches.

Surveys consistently show that many individuals lack basic financial skills and that there are significant disparities in financial literacy across demographic groups, with factors such as age, gender, education level, and socio-economic status influencing financial knowledge levels.

1.2 Objectives of the Thesis

The primary objective of this thesis is to provide a detailed analysis of the current state of financial literacy in Italy, positioning it within a global context. The study aims to critically review the financial education initiatives currently implemented across Italy by the government, private sector, and non-profit organizations.

By examining these initiatives, the thesis seeks to evaluate their effectiveness and identify the impact on financial knowledge and behaviors among various demographic groups.

A significant portion of the thesis is dedicated to presenting case studies that assess the impact of financial education projects.

One case study focuses on a school-based project aimed at elementary school children, measuring the project's influence on their financial knowledge and behaviors towards money.

Additionally, the thesis includes an experimental study that explores how contemporary online environments can affect individuals with an advanced level of financial expertise.

Finally, it investigates an initiative that examines how boys and girls learn financial basics through simple interventions, highlighting the different learning patterns and behavioral impacts observed between genders.

Through these analyses, the thesis intends to offer valuable insights into the effectiveness of financial education programs in Italy and propose recommendations for enhancing their impact on financial literacy and behavior.

1.3 Financial Literacy Levels

This paragraph delves into the current landscape of financial literacy, examining its global reach and then shifting the focus to the specific context of Italy.

The first section examines financial literacy levels on a worldwide scale. By analyzing recent data and reports from international organizations, we will present a global perspective. This broader perspective allows us to situate Italy's financial literacy within a larger framework.

Following this, the chapter shifts its focus to Italy. The second section will explore the financial literacy landscape in the Italian context. This paragraph will illustrate data and research specific to Italy, highlighting unique characteristics and challenges the country faces. By comparing Italy's situation to the global picture, we can gain relevant insights and identify potential areas for improvement.

This understanding will serve as a foundation for further discussion on the importance of financial education and potential strategies for promoting financial literacy in Italy.

1.3.1 Financial Literacy Levels: Global Perspective

The creation of a standardized questionnaire by Lusardi and Mitchell in the early 2000s represented a significant advancement in the assessment of financial literacy.

This questionnaire, consisting of three fundamental questions commonly referred to as the *Big Three*, was designed to measure individuals' understanding of basic financial concepts such as interest rates, inflation, and diversification.

Below is Table 1, which contains the three questions initially formulated by Lusardi and Mitchell:

1. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? More than \$102** Exactly \$102 Less than \$102 Do not know Refuse to answer
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

More than today Exactly the same Less than today** Do not know Refuse to answer
3. Please tell me whether this statement is true or false. “Buying a single company’s stock usually provides a safer return than a stock mutual fund.” True False** Do not know Refuse to answer

Table 1: The *Big Three* financial literacy Questions and Answers (correct answers indicated with two asterisks)

Initially, implemented in the United States, the survey aimed to establish a consistent benchmark for evaluating financial literacy levels across different nations. The underlying motivation behind this initiative was based in the belief that proficiency in these foundational concepts could significantly impact individuals’ financial decision-making processes.

The significance of this standardized assessment tool extended beyond mere measurement. It provided the foundation for empirical research on the relationship between financial literacy and economic outcomes.

By quantitatively assessing financial literacy levels, researchers gained valuable insights into how individuals’ knowledge and understanding of financial concepts influenced their financial behaviors and decision-making.

Consequently, financial literacy emerged as a distinct field of study, motivating policymakers, and educators worldwide to recognize the importance of integrating financial education into school curricula.

The widespread adoption of standardized financial literacy assessments served as a source of inspiration for global initiatives aimed at improving financial literacy levels.

Recognizing the crucial role of financial education in improving informed decision-making and promoting financial well-being, many countries began mandating financial literacy education, starting in elementary school. This effort to prioritize financial education affirms the recognition of financial literacy as a foundational skill essential for navigating an increasingly complex financial landscape.

The financial literacy survey conducted by Professor Lusardi and her colleague Olivia Mitchell primarily focuses on the United States. However, this thesis concentrates on Italy. While it may not be the primary focus of the research, there is justification for examining studies pertaining to the United States.

The United States, being the world's leading economic nation with a highly developed financial system, presents an intriguing case study. Despite its economic strength, the level of financial literacy in the United States is notably low.

This contrast underlines the importance of financial education, particularly in Italy, which has a quite different economic history and trajectory compared to the United States.

Professor Lusardi's survey, conducted in the early 2000s, filled a gap by collecting nationally representative data on individuals' understanding of fundamental economic and financial concepts.

The creation of this survey module for the Health and Retirement Study (HRS) in 2004 was guided by four essential principles: simplicity, relevance, brevity, and the ability to distinguish between varying levels of financial literacy.

The significance of this research is found in its broader impact on international comparisons of financial literacy. By incorporating questions similar to the *Big Three* into the S&P Global Financial Literacy Survey, covering over 140 countries, researchers have been able to develop a comprehensive understanding of financial literacy levels worldwide. This further highlights the importance of properly measuring financial literacy as a crucial step in addressing and improving financial education initiatives globally.

It is important to emphasize the simplicity of the *Big Three* questions, as they do not involve complex calculations. The aim of these questions is not to test mathematical abilities.

Additionally, these questions evaluate familiarity with financial terminology. For instance, terms like interest rates, inflation, or stock mutual funds are not explicitly defined within the questions.

By presenting the questions in a multiple-choice format and providing respondents with the option to select *do not know* or *refuse to answer*, respondents are not encouraged to guess randomly when unsure.

As highlighted in numerous previous studies and depicted in Table 2, financial literacy levels are remarkably low in the United States. For example, while 81 percent of Americans demonstrate an understanding of simple interest rates, approximately three-quarters correctly answer the inflation question, and merely 61 percent of the population recognize that a single stock entails greater risk than a stock mutual fund. Overall, only 43 percent of Americans answer all three questions correctly (Lusardi and Mitchell, 2023).

Consequently, the comprehension of fundamental financial concepts cannot be taken for granted, even in a nation with well-established financial markets where these topics have been significant for decades.

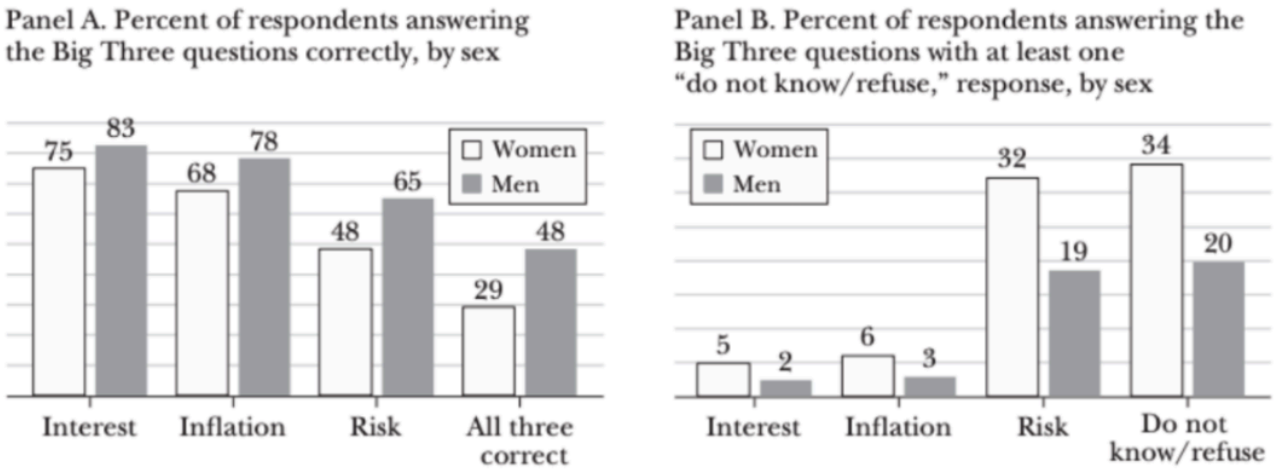
	Correct	Incorrect	Do not know/refuse
Interest	80.6%	16.4%	3.0%
Inflation	75.5%	20.7%	3.8%
Risk	60.7%	17.1%	22.2%
All *Big Three* correct	43.3%		

Table 2: Financial literacy in the US population: *Big Three* questions

The utility of the *Big Three* does not end here, with the same approach, considerations can also be made about subgroups within a country's population.

For instance, notable differences between men and women can be observed. It is not just the proportion of women who responded incorrectly compared to men, but in Panel B of Figure 1, it is evident that women tended to answer *do not know/refuse* much more often, indicating low self-confidence in their knowledge (this tendency is not necessarily negative, as it may reflect a lower incidence of *overconfidence*, a common psychological bias that often affects men more).

Briefly, *overconfidence* refers to being overly sure of one's abilities. It comes in two forms: believing you are better than average, and illusions of control and knowledge. While self-confidence is beneficial, *overconfidence* can lead to underestimating risks. It is prevalent in online investing, where users may feel more in control but often overestimate their expertise.



Source: Authors' tabulations, 2019 Survey of Consumer Finance.

Figure 1: Financial literacy differences by sex

Furthermore, as observed in a survey by Bertola and Lo Prete, the fraction of *I do not know* answers is lower than the fraction of wrong answers. This suggests that many respondents prefer to guess rather than admit ignorance, potentially leading to misclassification in financial literacy assessments.

In addition, they noted that the fraction of *I do not know* answers is generally lower across all population subgroups and is particularly lower for males, older adults (50+), individuals with a college degree, and those who consider their financial knowledge insufficient (Bertola and Lo Prete, 2024).

The authors highlight interesting relationships between *I do not know* answers and *incorrect* answers. For instance, females and younger respondents (under 49) tend to admit not knowing more often but also make more mistakes.

In contrast, males, despite admitting ignorance less often, make more mistakes on certain questions, such as risk diversification.

The analysis reveals that respondents with higher education levels and those who believe their financial knowledge is adequate are less likely to admit ignorance but still make errors at a similar rate to less educated individuals. This indicates again a potential *overconfidence* issue.

Bertola and Lo Prete emphasize that standard strategies for measuring financial literacy, which classify respondents based on correct answers to all questions, can misclassify a significant proportion of individuals due to this guessing behavior.

Significant differences are observed based on educational achievement levels. While 65 percent of individuals with college degrees or higher achieved a perfect score on the *Big Three*, only 18 percent of high school dropouts reached this level, as illustrated in panel A of Figure 2.

However, even within the college-educated group, over one-third of respondents did not know one or more of the *Big Three* questions. In essence, higher education alone is insufficient to impart financial literacy to consumers.

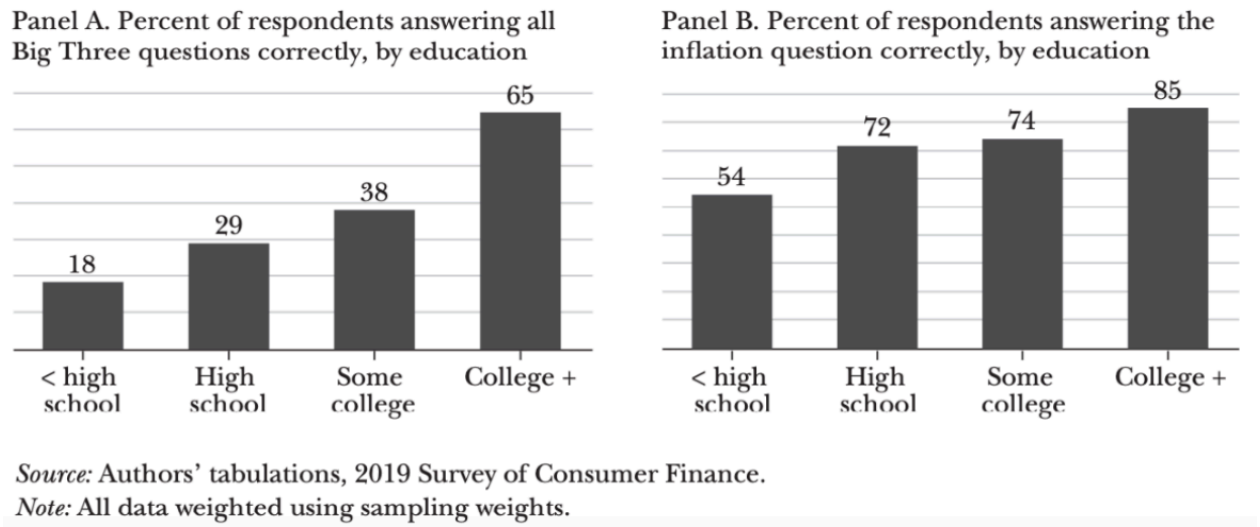


Figure 2: Financial literacy differences by education

A meaningful discovery from various studies, as depicted in Figure 3, is that financial literacy levels are low even in high-income countries (such as Italy and Japan) and those with robust education systems (such as Sweden). I chose to include this graph here based on data from Lusardi and Mitchell (2023), as I found it particularly interesting, given my focus on Italy. As highlighted by Lusardi and Mitchell, the data concerning Italy and Japan are impressive.

Specifically, Italy has the highest percentage among the analyzed countries of individuals who did not answer any of the three questions correctly. This suggests a highly polarized scenario in Italy, with a significant gap between those who possess financial knowledge and those who do not.

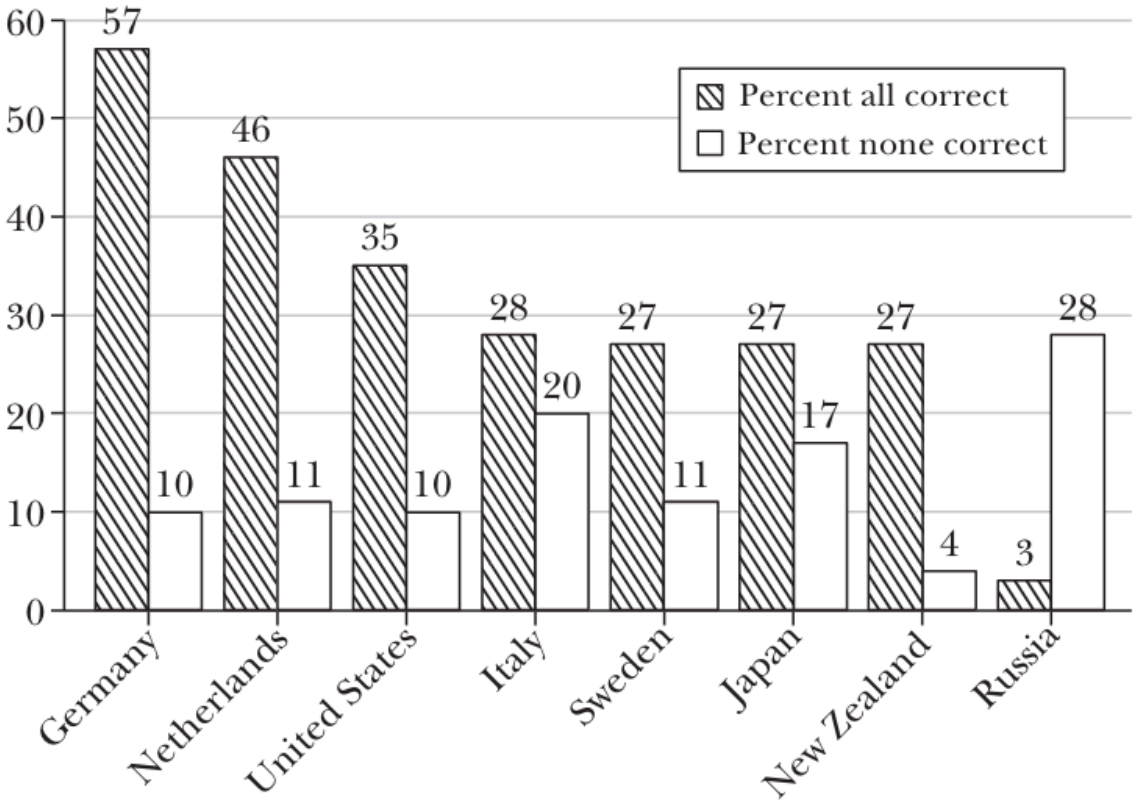


Figure 3: Financial literacy around the world

Source: (Lusardi, Mitchell, 2023)

1.3.2 Financial Literacy Levels: The Italian Context

Italy represents a compelling case study for examining the challenges and opportunities in promoting financial literacy. Despite being one of the largest economies in the world, Italy lags behind other developed countries in terms of financial knowledge and behaviors, with many Italians lacking basic financial knowledge and skills.

The low financial literacy of Italians is evidenced, among other indicators, by the Survey on Financial Literacy and Skills of Italians (IACOFI) conducted by the Bank of Italy at the beginning of 2020 (preceded by one at the beginning of 2017), which highlights Italians' poor financial literacy.

The measurement of financial literacy in this study follows the OECD approach, which provides an overall indicator from scores calculated for three sub-dimensions: knowledge, behaviors, and attitudes:

a. *Knowledge* (indicated in blue in Figure 4). The questions focus on understanding basic concepts relevant for making financial choices: inflation, interest rates, the difference between simple and compound interest rates, and risk diversification.

b. *Behaviors* (indicated in red in Figure 4). The questions are related to the management of financial resources in the short and long term: setting financial goals, planning resources for consumption, bill payments, and savings in recent months.

c. *Attitudes* (indicated in green in Figure 4). The questions assess individuals' orientation towards saving, especially of a precautionary nature, from a long-term perspective.

The average level of financial literacy among Italians in 2020 is 11.2, on a scale ranging from 1 to 21, which is essentially consistent with the value recorded in 2017.

It is worth noting here that 21 represents an acceptable level of knowledge, so it does not represent a level of "expertise" in financial matters.

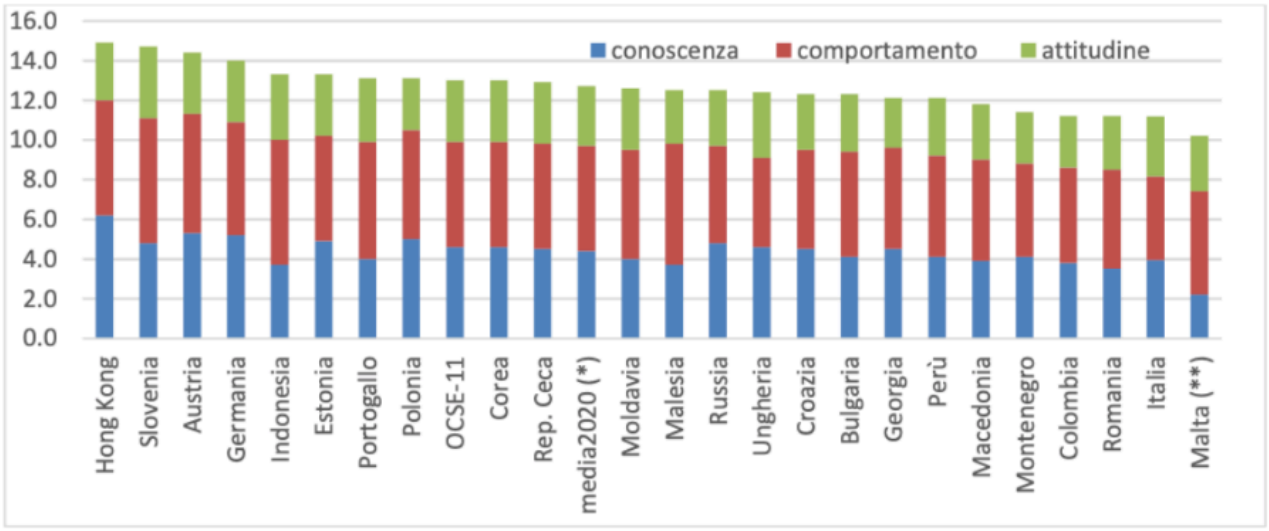


Figure 4: Financial literacy levels in 2020: comparing Italy with other countries

Source: OECD (2020) International Survey of Adult Financial Literacy. (*) The average is calculated across 23 countries, excluding France, Malta, and Thailand. (**) Malta calculated the scores using a smaller number of questions.

For the overall financial literacy index, Italy ranks 25th out of 26 countries considered in 2020, ahead only of Malta, which, however, utilized a partially different questionnaire. Italy holds a slightly better relative position in terms of knowledge (20th) and more decisively in terms of attitudes (12th), while ranking last in behaviors.

The 26 countries participating in the survey in 2020 have an average score of 12.7 – 13 for OECD countries – while Italy's score is, as previously mentioned, 11.2.

While significant efforts have been made in Italy since 2017 to improve the average level of financial education, the country still lags behind in 2020 compared to other analyzed countries. This disparity can be attributed to various factors, including limited access to financial education resources and cultural attitudes towards money and finance. The low financial literacy has high costs, which have been further highlighted by financial crises. On one hand, these crises have made explicit the cost to individuals and society of poor financial choices.

They have also highlighted that, when the costs become particularly high and affect large segments of the population or particularly vulnerable groups, the State is called upon to intervene, with consequences for all citizens and, in the most severe cases, for financial stability. The percentage of Italians surveyed in 2020 who achieved a knowledge score that is considered sufficient by the OECD (5 or more out of 7) is 44.3 percent, compared to 32.6 percent in the previous survey. The percentage of respondents for whom the behavior score is considered sufficient (a score of 6 or more out of 9) remains stable compared to the previous survey (27.3 percent versus 27 percent). Regarding attitude, however, the percentage of those scoring equal to or higher than 4 is 13.7 percent, a decrease from the previous survey 18.8 percent (see Figure 5; data from D'Alessio et al., 2020).

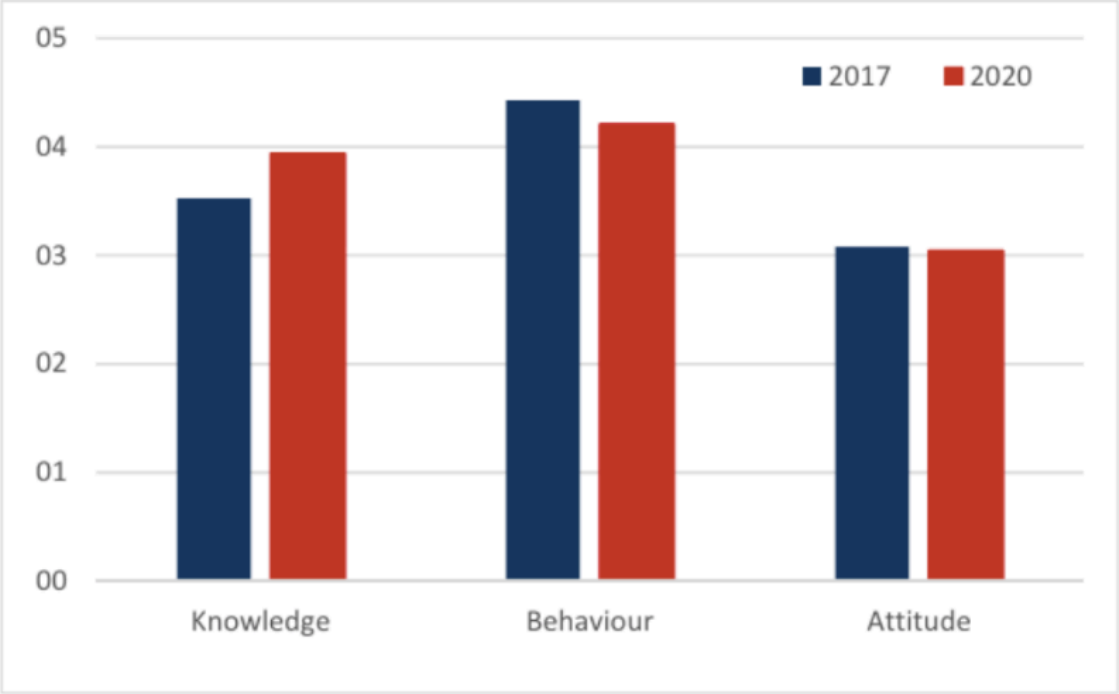


Figure 5: Financial literacy in Italy: the components *(average values)*

Examining the indicators based on respondent characteristics, the 2020 survey confirms that financial literacy exhibits high variability among the population, depending on education, gender, age, and geographical area.

Graduates demonstrate a higher level of financial literacy compared to individuals with lower levels of education (Figure 6; data from D'Alessio et al., 2020).

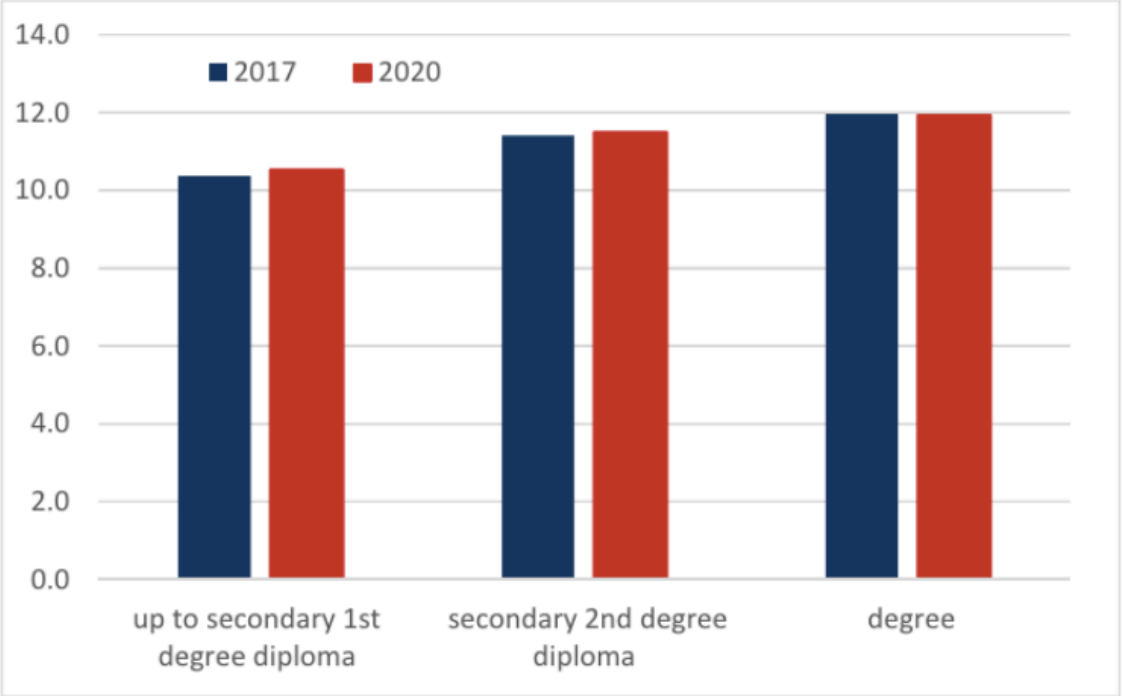


Figure 6: Financial literacy in Italy by educational qualifications, 2017-2020 *(average values)*

Another intriguing aspect highlighted in the Bank of Italy analysis, which further motivates this disappointing financial literacy level in Italy, is the fact that young people in Italy typically remain living with their parents until around the age of 30 (compared to around 24 years old in Germany, for example).

In most cases, this does not incentivize young individuals to acquire financial skills, budgeting habits, retirement planning, or setting financial goals, all of which are virtuous behaviors that increased education and awareness should stimulate in individuals.

Figure 7 from D'Alessio (2020) presents a comparative analysis of financial literacy scores across different age groups for the years 2017 and 2020.

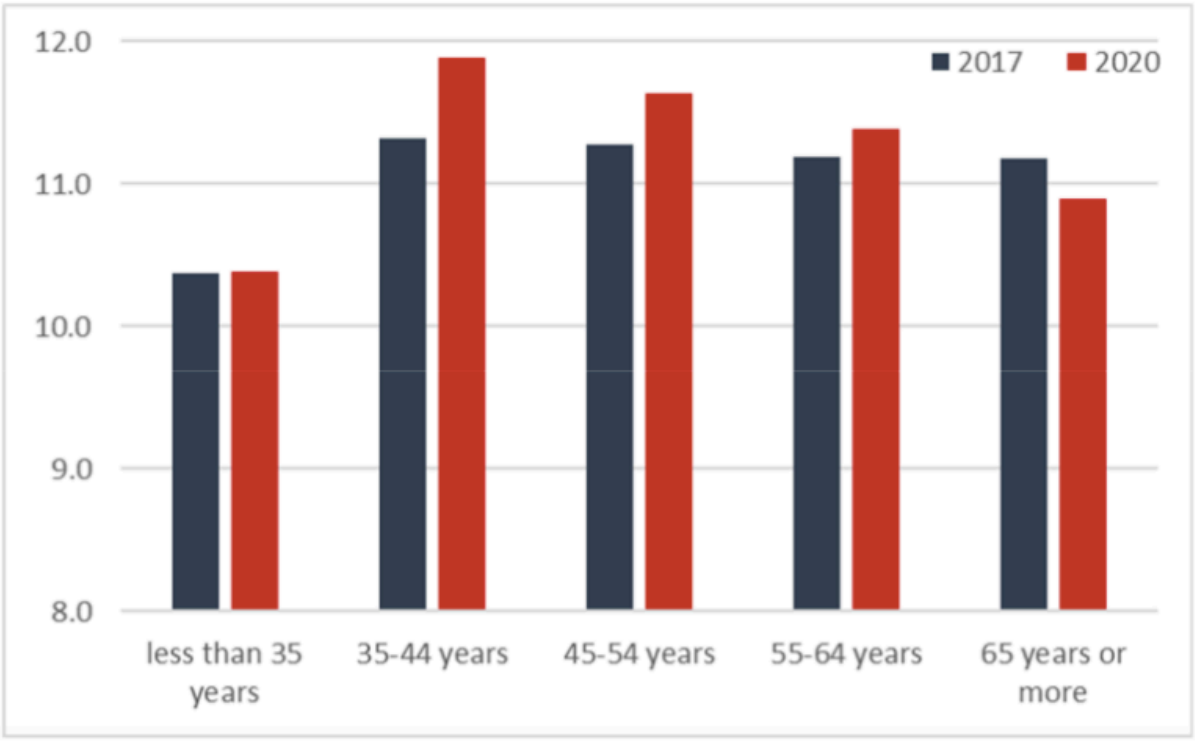


Figure 7: Financial literacy in Italy by age group, 2017-2020 *(average values)*

Italians are nevertheless aware of their modest financial knowledge. The percentage of individuals who believe they have below-average knowledge exceeds the OECD average by about 20 percentage points.

The tendency to underestimate one's own knowledge is stronger among women: in 2020, 33 percent of them rated their level of financial knowledge below average, while in reality, they scored above average, compared to 26 percent among men (Figure 8; data from D'Alessio et al., 2020). Between 2017 and 2020, the perception of having limited capabilities in financial matters has increased.

Based on information from psychological literature, it is observed that Italians are less susceptible to the Dunning-Kruger effect (Dunning et al., 2003), a cognitive bias in which individuals with limited expertise in a field tend to overestimate their abilities.

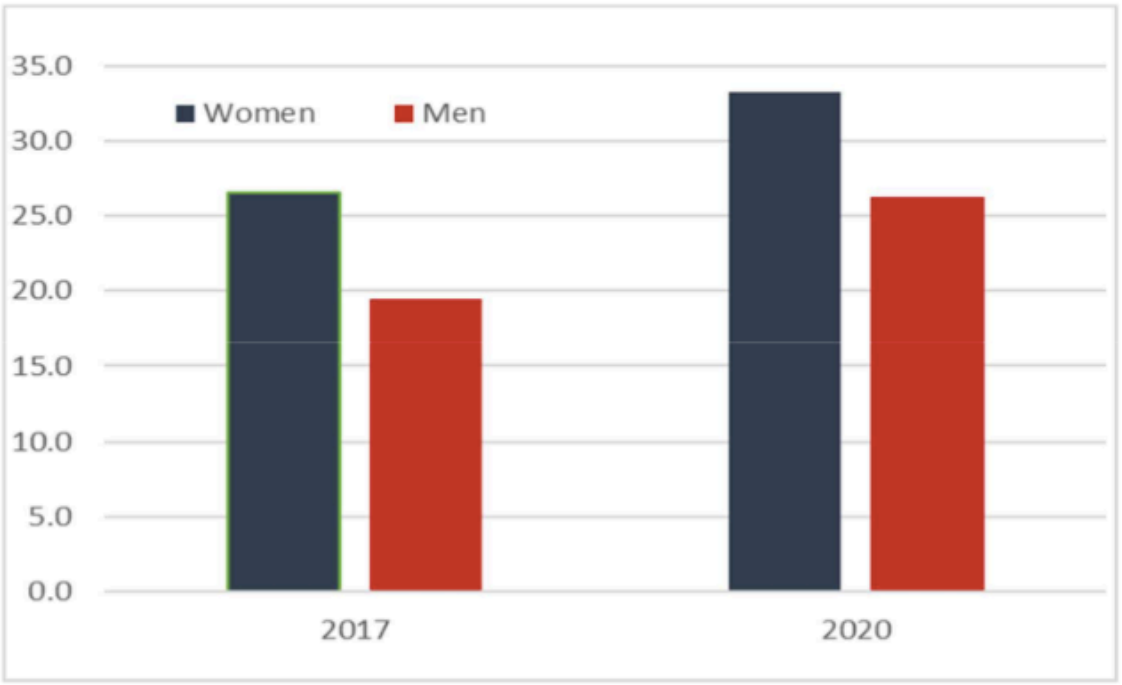


Figure 8: Underestimation of their own financial knowledge in Italy. Individuals who judge their own financial skill as below the average but have scores above the average *(percentages)*.

These data highlight the urgent need for progress in financial education within the country.

However, the Italian government has recognized the importance of financial literacy and has implemented various initiatives to improve financial education nationwide.

These initiatives include educational campaigns, school-based financial education programs, and partnerships with financial institutions and non-profit organizations to promote financial literacy among the population.

By focusing on Italy, this research aims to shed light on the unique challenges facing the country in promoting financial literacy and identify strategies for enhancing financial education efforts.

1.4 Statement of the Problem

The main issue is the uncertainty about which types of programs and initiatives most effectively increase the financial literacy level of participants. This uncertainty comes primarily from the rarity of impact assessments of these interventions, and even more rarely are such assessments conducted in Italy. This lack of clarity obscures our understanding of how well many initiatives can improve the poor financial literacy levels of Italians.

Moreover, behavioral factors are rarely considered in these assessments, which often focus solely on financial knowledge due to its ease of measurement. However, understanding financial principles is not the only element that influences an individual's financial decisions. Therefore, it is crucial to consider the behavioral aspects as well. For this reason, I chose three case studies that also account for the participants' behaviors.

1.5 Structure of the Thesis

This thesis is organized into four chapters that collectively explore the landscape of financial literacy and financial education programs in Italy. Each chapter is designed to discuss important factors characterizing the current state of financial education in Italy, examining key initiatives, challenges, and outcomes in promoting financial literacy.

Chapter 1, Introduction, provides an overview of the research topic, outlines the rationale for studying financial education programs, and presents the focus areas guiding the study.

Chapter 2, Overview of Financial Education Programs and Key Actors in Italy, explores some of the most relevant financial education initiatives currently implemented in Italy and the key institutions

that promote them. This chapter aims to provide a general understanding of the landscape of financial education programs in the country.

Chapter 3, Analysis of Financial Education Initiatives, and Their Impact on Financial Behavior, focuses on a detailed examination of representative financial education interventions. This analysis includes insights into program contents, objectives, participant demographics, and impact assessments.

Chapter 4, Conclusions and Future Directions, summarizes the key findings of the study, reflects on its significance, and offers recommendations to enhance financial education initiatives aiming to better address challenges and improve financial literacy outcomes.

In addition to these chapters, the thesis includes a comprehensive list of references cited throughout the text, providing readers with access to the sources consulted during the research process.

2. Overview of Financial Education Programs and Key Actors in Italy

During the introductory chapter, we extensively examined the contemporary significance of financial education, emphasizing its role not only globally but particularly within the context of Italy.

However, as we acknowledge its importance, a fundamental question arises: is financial education truly effective? This question leads to a complex debate, characterized by diverse perspectives and varying outcomes.

While it may seem relatively easy to teach certain fundamental financial concepts, such as understanding interest rates or inflation, the challenge lies in influencing behavioral patterns, such as instilling a culture of saving or promoting awareness of supplementary pension schemes.

Indeed, the efficacy of financial education programs will depend significantly on their design and implementation strategies. A well-structured program should be designed to suit the specific needs and characteristics of its target audience and it should adopt a long-term perspective. Equally essential is the professional training of educators involved in running the program, ensuring they possess the requisite knowledge, skills, and pedagogical techniques to engage effectively with participants.

Furthermore, an effective financial education initiative should incorporate mechanisms for ongoing evaluation and monitoring of its impact. This entails not only assessing short-term outcomes, but also examining the program's long-term influence on participants' financial behaviors and decision-making processes.

By systematically evaluating its effectiveness, program administrators can identify areas for improvement and refine their approach based on empirical evidence and accumulated insights.

The data from the ONEEF observatory (the National Observatory of Economic and Financial Education), which maps and documents financial education programs in Italy, reveal some interesting findings. For instance, current initiatives are predominantly focused on the northern regions of the country, where financial literacy levels are relatively higher. However, if this trend persists, it could aggravate territorial inequalities instead of contracting them. This underlines the need for a national strategy, a recent development for Italy.

Additionally, it is alarming that less than 5% of the initiatives identified in 2018 were subject to impact assessments, indicating a significant area for improvement.

In this chapter, we aim to explore the landscape of financial education initiatives in Italy, providing brief descriptions of some of the most relevant initiatives. These include those promoted by the government and the Bank of Italy, as well as initiatives by non-profit foundations and private companies such as commercial banks, media groups, and associations.

2.1 Government-led Financial Education Initiatives

The objective of the following paragraph is to provide an overview of the most important initiatives promoted by the government and the central bank.

Each subsection will focus on a specific research group or organization engaged in developing financial education programs and initiatives.

2.1.1 Committee for the Planning and Coordination of Financial Education Activities

Since 2017, recognizing the importance of having a good level of financial education, particularly following strong global crises with significant repercussions on the Italian economic system. The Government has decided to establish the Committee for the Planning and Coordination of Financial Education Activities.

Its purpose is to promote and coordinate initiatives aimed at raising awareness among the population of financial, insurance, and pension knowledge and skills, and improving everyone's ability to make choices consistent with their goals and circumstances.

Numerous initiatives have been launched to raise awareness and attention to the need to acquire knowledge and skills in the financial, pension, and insurance fields.

These initiatives include the creation of a financial education portal and the introduction of Financial Education Month in Italy in October 2018.

Additionally, interventions in television and radio programs and in national and local print media, along with many collaborations with public and private entities and institutions, aim to create an extensive network capable of reaching specific segments of the population.

The lack of financial literacy has significant costs. A population with low levels of financial literacy can affect the well-being of the entire economic system of their country. Increased financial instability may result from poor personal financial management, leading to higher default rates on loans and mortgages. Inefficient markets may occur because financially illiterate individuals tend not to make optimal investment decisions, leading to an inefficient allocation of resources, which can slow economic growth and reduce overall economic efficiency. There may also be an increase in social welfare costs due to higher levels of poverty and financial distress, which increases the demand for

social welfare programs and public assistance. The retirement system may be negatively impacted because low levels of financial literacy can lead to inadequate retirement savings, increasing the pressure on public pension systems and potentially leading to higher taxes and reduced benefits.

Crises reveal the consequences of poor financial decisions and show that high costs affect large portions of society, necessitating state intervention. The Committee, established by the Minister of Economy and Finance, along with other ministries, implements the National Strategy for Financial, Insurance, and Pension Education.

Approximately 70 countries, including Italy, have adopted national strategies for financial education. Learning from the experiences of others is essential.

The Committee started by conducting an in-depth analysis of financial literacy levels and the existing landscape of educational programs. The situation in Italy, as outlined in the introduction of the thesis, is notably concerning, with Italy falling behind economies of comparable size.

The Committee's examination identified approximately 200 initiatives involving around 250 entities. While this figure is not insignificant, it does not fully meet Italy's educational requirements. A majority of these initiatives were relatively small-scale, with nearly two-thirds involving fewer than 1,000 individuals.

While some programs were expansive, well-organized, and made use of contemporary educational materials, many initiatives were primarily focused on disseminating informational resources. Moreover, adult-oriented programs primarily targeted a general audience, with limited offerings directed to vulnerable populations such as women, the elderly, or immigrants.

Common adult education topics included budget management, understanding risk and return dynamics, savings strategies, and supplementary pension schemes. The analysis of existing financial

education programs also highlighted the lack of comprehensive evaluation efforts to assess the impact of educational initiatives on both knowledge acquisition and behavioral change.

Based on OECD/INFE guidelines, the strategy proposed by the Committee outlined four key intervention areas crucial for individual well-being and relevant to inclusion in national agendas:

- financial transactions and money management;
- effective budgeting and savings practices;
- understanding risk and return dynamics;
- comprehension of economic and financial systems.

The program outlines the primary initiatives that are aimed at various demographic groups, including the general population, youth, adults, and vulnerable demographics such as women, the elderly, and migrants. Additionally, it focuses on support for small entrepreneurs.

Essentially, these efforts primarily engage individuals through a national financial education portal, quellocheconta.gov.it, launched in April 2018.

Mass communication campaigns are also utilized to enhance awareness and emphasize the importance of acquiring financial, pension, and insurance knowledge and skills.

Additional initiatives within the program include the Financial Education Month, which began in October 2018 and occurs annually. This month-long event features various activities and events, both nationally and internationally, designed to promote awareness about financial literacy, insurance, and retirement planning.

The program also relies on partnerships with national and local agencies, newspapers, and economic publications, with a focus on reaching vulnerable demographics.

These collaborations extend to national radio and television networks, incorporating basic financial, insurance, and pension education into popular entertainment programs and games.

Moreover, in collaboration with MIUR, the Committee promotes the Economics and Finance Olympics in Italy that are a nationally recognized educational competition aimed at high school students. These Olympics aim to promote students' interest and awareness in topics related to economics, finance, and financial management.

The event takes place annually, involving students from various schools and regions of Italy. During the Olympics, students participate in a series of challenges and competitions that test their knowledge and skills in these areas.

Competitions may include quizzes, practical exercises, simulations of financial situations, and more. Additionally, the Olympics offer workshops, conferences, and meetings with industry experts, allowing students to deepen their knowledge and acquire new skills.

The finalists usually arrive from many Italian Regions and between them there are an almost equal number of male and female students, this is the demonstration that statistics concerning financial literacy can be improved over time.

In the following table, I have summarized some potential strengths and weaknesses for each initiative mentioned in the paragraph according to my perspective.

Initiative	Strengths	Weaknesses
Establishment of the Committee	Coordinated national strategy and numerous initiatives launched	Bureaucratic challenges and slow implementation
Financial education portal	Centralized resource for information	Primarily focused on information dissemination, not engagement
Financial education month	National attention to financial literacy, annual event	Limited long-term impact assessment
Media campaigns	Wide reach through TV, radio and print media	Insufficient focus on vulnerable populations
Partnerships with public and private entities	Extensive network creation	Coordination challenges and inconsistent program quality
Economics and Finance Olympics	Engages youth and promotes interest in financial topics	Limited impact on broader adult population, particularly vulnerable groups
General adult education programs	Covers essential financial topics (budgeting, saving, etc.)	Lack of comprehensive evaluation of knowledge and behavioral change

Table 3: Strengths and Weaknesses of Committee for the Planning and Coordination of Financial Education Initiatives

2.1.2 CONSOB's Efforts to Enhance Financial Literacy

CONSOB supports financial education for citizens as an additional asset alongside the conventional methods reliant on regulations. In 2014, CONSOB launched a project named the *Investor Charter*

aiming to facilitate the widespread sharing of essential skills and knowledge needed by citizens in the financial sector.

The *Investor Charter* initiative consisted of three separate but interrelated subprojects:

- The establishment of a dedicated web portal by CONSOB focused on Investor Education;

- The introduction, under CONSOB's supervision, of an Out-of-Court Dispute Resolution Body requiring intermediaries' mandatory participation, following the model of the Financial Banking Arbitrator;

- The improvement of the web application for aggregating complaints and reports from savers submitted to CONSOB, with the goal of improving the ability to filter and select relevant information to inform potential supervisory actions.

The layout of the investor education website, designed to reach a wide spectrum of users rather than a specific demographic, starts with an introductory segment dedicated to the functioning of the financial system. This is followed by a segment focusing more closely on personal finance matters, labeled as the "Investment Guide" section.

Following the initial sections, the portal proceeds to an educational segment aimed at imparting fundamental understanding of key financial tools and products, incorporating video resources. It then advances to interactive activities and incorporates elements of behavioral finance, employing gamification techniques through interactive quizzes and games.

Through these initiatives, individuals can evaluate their financial literacy, assess their risk inclination, analyze impulsiveness, and identify cognitive constraints and behavioral challenges. This offers an

opportunity to enhance awareness regarding personal characteristics and mindsets that may impact investment choices.

In essence, the web portal functions as an educational and informative resource accessible to anyone, be it students, educators, employees, or retirees, seeking to delve into economic and financial concepts and methods to effectively handle their savings in the long run.

However, although CONSOB acknowledges the existence of a web portal always available for those interested and capable of self-learning skills in this field, it believes that schools are the most suitable place, both logically and logistically, to become familiar with financial concepts and understand their various implications.

For this reason, the Commission has chosen to initiate a significant experimental initiative named *Finanza: una storia da raccontare…: dal baratto al bitcoin* ("Finance: a narrative to unfold... tracing from bartering to bitcoin"). Integrated into the activities outlined for the World Investor Week 2018 and the Financial Education Month, this initiative included developing instructional modules for secondary school students, employing the approach of "training of trainers". Initially proposed in 2018 solely to educational institutions within the Lombardy Region.

Nevertheless, CONSOB considers it equally important to develop initiatives for adults, as the challenges of targeting such individuals are well-known compared to other demographics, especially those residing in peripheral regions or falling within more vulnerable segments of the population. The task involves finding appropriate teaching methods to engage them more effectively.

Thus, it considered using unconventional methods to increase awareness in this situation, reducing the educational aspect while highlighting interactive and entertaining mediums such as theater.

The Commission then decided to launch this edutainment project called *Finanza in Palcoscenico* ("Finance on Stage"), which combines theatrical performances of financial stories with discussions using simple language to extract important lessons for savers and investors from the stories portrayed.

Another important demographic that is often ignored, but which the Commission considers crucial, especially in an economic system like the Italian one, is the improvement of financial education delivery for Small and Medium-sized Enterprises (SMEs) managers. Relevant surveys on SMEs' access to funding sources indicate that bank loans remain the predominant method used by SMEs across Europe to meet their financial needs.

The heavy dependence on debt, especially from banks, arises from a culture that restricts the participation of skilled investors, consequently impeding the expansion opportunities for businesses.

There are other funding options for SMEs beyond traditional bank loans (including crowdfunding and alternative investment funds). Additionally, the steps for SMEs to be listed on specialized trading markets, public offerings of financial products, fundamental aspects of corporate law, sustainable finance initiatives, digital financial platforms, and financial misconduct are all essential competencies for SMEs.

The Commission also plans a range of initiatives that incorporate gamification and applications to aid individuals and families in financial decision-making.

For instance, through a partnership with the University of Trento, it was developed *APP...RENDIMENTO: investire non è un gioco. Ma si può imparare giocando!* ("APP...RENDIMENTO: Investing isn't child's play. But it can be learned through play!"). This interactive game, available on the investor education web portal, is designed for a younger audience. Throughout its seven stages, the game encourages players to consider common investment mistakes and to reflect on unintended errors in financial decision-making.

In the following table, I have summarized some potential strengths and weaknesses for each initiative mentioned in the paragraph according to my perspective.

Initiative	**Strengths**	**Weaknesses**
Investor charter web portal	Accessible to a wide range and comprehensive educational resources	Reliant on self-motivated individuals, it may not reach all demographics
Out-of-court dispute resolution body	Easy way for people to resolve financial disputes without going to court	Mandatory participation could be onerous for some intermediaries
Improved web application for complaints	Improves data collection for better supervisory actions	Depends on users reporting issues correctly and might still overlook some important complaints
Finanza: una storia da raccontare...	Integrates financial education into school curricula and other national projects, it uses engaging methods	Limited initial geographic scope (Lombardy Region) and dependent on school adoption
Finanza in palcoscenico	Uses edutainment to engage adults and makes financial concepts accessible	May not appeal to all demographics and effectiveness depends on production quality
Financial Education for SMEs	Addresses funding and investment issues for SMEs	Cultural barriers to adoption, requires continuous engagement and education

Gamification Initiatives (e.g., APP...RENDIMENTO)	Engages younger audience through interactive learning	Effectiveness depends on the game's design and user engagement

Table 4: Strengths and Weaknesses of CONSOB Initiatives

2.1.3 Bank of Italy's Role in Financial Literacy Promotion

The Bank of Italy is firmly dedicated to advancing financial literacy and believes that the nation as a whole could benefit from a greater collective understanding of financial matters. To this end, the bank has implemented programs tailored to various demographics, including youth, adults, professionals, and vulnerable populations. It customizes its educational approaches based on age groups. Initiatives oriented toward schools, for instance, differ in structure and content from those targeting adults, which may be conducted in adult education institutions, workplaces, or professional settings.

Especially targeting youth, the Bank of Italy chose to emphasize schools as a primary focus. Back in 2007, it made history by being the first institution to collaborate with the Ministry of Education, signing a protocol. This agreement aimed to provide schools with a well-structured educational curriculum focusing on economic and financial subjects.

The Bank of Italy's initiative for financial education in schools is structured around empowering educators to become proficient in teaching financial concepts. Teachers across different educational levels are involved in training seminars offered by the bank's branches, where they acquire knowledge to transfer to students, integrating it into their teaching plans or executing supplementary projects. To support this mission, the bank has developed dedicated educational resources for teachers.

These materials include volumes such as *Tutti per uno economia per tutti!* ("All for one economy for all!"), which explore five key themes: income management, monetary principles, transactional processes, savings strategies, and credit fundamentals.

During the academic year 2021-22, the initiative reached around 3,000 classrooms across the country, representing nearly 1 percent of all classrooms in Italy. Among the participating schools, 57 percent were secondary schools, 23 percent were primary schools, and the remaining 20 percent were elementary schools. Teachers taking part in the initiative dedicated an average of 8 hours per class to financial education. Overall, teachers addressed an average of two topics from the five main themes outlined earlier. The most commonly covered subjects included those related to currency and pricing, as well as transactions and acquisitions. On the contrary, credit received the least attention, possibly due to students' limited interest in the topic at this stage. Although still insufficient compared to the "leap forward" advocated by Professor Annamaria Lusardi that Italy needs, it is a start.

In Italy, certain aspects of the education system pose challenges to implementing financial education in schools. Except for a few select secondary schools where economics is part of the curriculum.

In addition to its work on financial education in schools, the Bank of Italy extends its efforts through branch-led initiatives targeting children and adolescents, emphasizing the significance of acquiring fundamental economic and financial skills. These initiatives include activities featured in national awareness campaigns like *Global Money Week* and *Financial Education Month* often employing interactive methods such as gaming, including digital platforms like Kahoot.

Also, the bank supports contests like the *Inventiamo una banconota* ("Design a Banknote") competition, where classes compete to devise imaginative banknote designs based on specific economic themes, and the *Generation €uro Students' Award* where student teams predict monetary policy choices.

The Bank of Italy provides initiatives tailored to both the general public and specific citizen groups as well. The main financial education tool the Bank of Italy uses to reach the general public is the Financial Education Portal.

Similar to the strategy adopted by the Committee created by the Government, the Bank of Italy decided to focus on creating its own web portal, serving as a centralized hub for various contents, information, and events, including workshops and seminars. The portal, named *L'Economia per tutti* ("Economics for Everyone") is an online platform designed with the primary objective of providing accessible and comprehensive economic education to the general public.

At the core of the portal is a commitment to illustrate economic concepts in a way that everyone can understand and find useful, no matter their background or prior expertise in economics.

The personal finance content is organized into five main skill areas: "pianificare", ("planning"), "pagare" ("payments"), "chiedere un prestito" ("loans"), "risparmiare" ("savings") and "investire" ("investments"). These materials are complemented with interactive multimedia tools including video interviews, audio clips, infographics, calculators, games, and quizzes. These tools aim to immerse and retain users, particularly those with less experience, encouraging them to explore personal finance topics more extensively.

In addition, the Bank of Italy has launched targeted programs for certain demographics. For example, the Ministry of Education's Provincial Centers for Adult Education (CPIA) are public schools that serve immigrants. The Ministry of Education introduced an economic and financial course into CPIAs through the *EduFinCPIA* pilot initiative in 2016. The criteria for the course content, which comprised 33 hours of instruction over the course of the academic year, were drafted in collaboration with the Bank of Italy. Bank of Italy branches have been providing instructional modules that are enabled upon request from local CPIAs since 2016.

Experience has demonstrated that CPIA students are more interested in studying issues that are relevant to their daily lives, such checking accounts and payment systems, or topics that are connected to workforce integration, including microenterprise financial management, microcredit, and migrant money transfers.

Women constitute another demographic that the Bank of Italy tried to prioritize. As evidenced in chapter one, women generally exhibit a lower degree of financial literacy in comparison to men, alongside frequently encountering feelings of anxiety, diminished self-assurance, and/or disengagement concerning economic and financial subjects.

The Bank has crafted a financial literacy initiative tailored expressly for women, delivered through video lectures paired with interactive assessments and segmented into four sections: “pianificazione finanziaria” (“financial planning”), “strumenti di pagamento elettronici” (“electronic payment methods”), “conto corrente” (“checking accounts”), “home banking” (“online banking”), “sicurezza informatica” (“cybersecurity”), and “indebitarsi con prudenza” (“responsible borrowing”). These modules are accessible via the platform.

Furthermore, in 2022, an initiative aimed at women in the workforce commenced, facilitated by partnerships with labor unions and various private and public employers.

In 2021, the Bank initiated a project targeting small-scale entrepreneurs and artisans with limited financial knowledge. This project was conducted in partnership with the prominent trade associations CNA and Confartigianato, known for their extensive membership base and widespread presence across the country. The project offers four distinct financial tracks: “La finanza della piccola impresa” (“Small Business Finance”), “Il rapporto con la banca” (“Relationship with the Bank”), “La gestione delle difficoltà finanziarie” (“Managing Financial Difficulties”) and “Centrale dei rischi, pagamenti e strumenti di tutela” (“Risk Center, Payments, and Protection Instruments”).

The Bank of Italy feels that there is still more work to be done in improving the general public's financial literacy, even though it has been a strong advocate for financial education since the 2000s.

The teaching of fundamental financial and economic ideas should take place mostly in schools. Research on learning processes indicates that early exposure to financial subjects is necessary to shape actions, even before adult decisions are made.

In the following table, I have summarized some potential strengths and weaknesses for each initiative mentioned in the paragraph according to my perspective.

Initiative	**Strengths**	**Weaknesses**
Financial Education in Schools (*Tutti per uno economia per tutti!*)	Teacher training ensures educators are well-prepared; educational resources designed for different school levels	Limited curriculum integration, insufficient depth in certain topics
National Awareness Campaigns (e.g., Global Money Week, Financial Education Month)	Interactive methods, broad engagement, creative contests	Potentially limited long-term effects; dependency on event-specific interest
Financial Education Portal (*L'Economia per tutti*)	Accessible and clear content, interactive tools	May not reach those without internet access or digital literacy
EduFinCPIA (Adult Education)	Specific to daily life and workforce integration	Limited to those attending CPIA, potentially low enrollment
Women's Financial Literacy Initiative	Targeted content, video lectures, interactive assessments	Possible low engagement due to existing anxiety

		and self-confidence issues
Workforce Initiative for Women	Collaboration with labor unions and employers, focused on working women	Limited to women in the workforce, variable engagement across sectors
Small-Scale Entrepreneurs and Artisans Project	Partnership with trade associations, specific financial tracks	May not reach all entrepreneurs, especially those outside trade associations

Table 5: Strengths and Weaknesses of Bank of Italy Initiatives

2.2 Non-profit and Private Sector Initiatives

In the following paragraphs, we aim to illustrate some of the main financial education programs organized in Italy by private companies, such as commercial banks, foundations, and non-profit associations.

These initiatives play a crucial role in promoting financial literacy and empowering individuals with the knowledge and skills necessary to make informed financial decisions.

By exploring these programs in detail, we can gain insights into the diverse approaches and strategies employed by private entities to enhance financial education across different segments of society.

Additionally, we will examine the impact of these programs on improving financial literacy levels and fostering economic well-being among participants.

2.2.1 *Museo del Risparmio*'s Contributions to Financial Education in Italy

The *Museo del Risparmio* ("Museum of Saving") is an institution dedicated to promoting financial education and literacy through interactive exhibits. Through its exhibits and programs, the museum aims to equip visitors with the knowledge and skills necessary to manage their finances effectively.

The itinerary begins with an immersive exploration of key events in economic history, tracing the evolution of money, the emergence of trade, and the pivotal moments in banking history. From the birth of fiduciary loans to the introduction of the Euro and beyond, visitors are transported through time, gaining insights into the forces that have shaped our economic landscape.

Going beyond just historical stories, the museum offers an overview of common financial instruments, from stocks and bonds to derivatives and insurance.

Themed tours provide tailored experiences, featuring a diverse array of audio-visual and interactive elements. Documentaries bring financial concepts to life, while animated content adds a sense of fun into learning.

However, the museum welcomes the integration of economics, literature, and cinema, encouraging visitors to discover how these fields interact from another perspective. Famous writers like Dante, Molière, Shakespeare, and Hemingway share their views on money, giving thoughts that connect with visitors personally.

With innovation at its core, the museum's final room introduces visitors to the world of gamification. Within this space, interactive games and applications serve as effective educational tools, enabling visitors to evaluate their financial management skills in an entertaining and immersive manner. Through various challenges and reward systems, visitors are motivated to refine their abilities, earning points and prizes as they progress.

Nevertheless, it is important to emphasize that the *Museo del Risparmio* should not be considered solely as a physical location for those interested and curious about these topics. The museum is an institution very active in organizing numerous events and actively participates in other important contexts in Italy, such as the Financial Education Month. It collaborates with schools, the FEduF Foundation, and other significant associations across Italy committed to improving the level of financial education in the country.

For example, on the occasion of the International Festival of Economics held in Turin, the *Museo del Risparmio* has organized initiatives for schools of all levels, specifically:

- *"Monetopoli"* for primary schools: Starting from watching some videos from the Museo del Risparmio on the topic of money, students will face a series of challenges, games, and fun exercises to verify their correct understanding of the information received from the videos and tutors and to experiment with its practical application, also with the aim of acquiring (or reinforcing) the first knowledge and skills in the world of money;

- *"Alla ricerca del salvadanaio"* for lower secondary schools: After an introduction on the importance of understanding, selecting, and correctly using information, both in general and in economic contexts, students will engage in a challenge to locate a piggy bank based on some clues that must be recognized as true information or fake news;

- *"Economia per tutti"* for upper secondary schools: Following the reading of an economic news article, students will put themselves to the test in a challenge that will allow them to verify their ability to research, understand, and convey economic information, and also to learn to correctly decode the vocabulary and language used by various financial media.

In essence, the *Museo del Risparmio* goes beyond being merely a museum, it serves as a dynamic center for education, creativity, and exploration. By combining learning with entertainment, it

empowers visitors to take charge of their financial futures, engaging them through interactive displays and activities.

In the following table, I have summarized some potential strengths and weaknesses for each initiative mentioned in the paragraph according to my perspective.

Initiative	**Strengths**	**Weaknesses**
Historical economic exploration	Through insights into economic history, modern financial concepts are better contextualized	Could be overwhelming for visitors with no prior economic background
Overview of financial instruments	Offers detailed explanations of various financial instruments	Complexity of content may be challenging for younger or less knowledgeable visitors
Themed tours	Tailored activities consider a range of interests and varied audio-visual components stimulate participation	Resource-intensive to maintain and update a variety of tours and materials
Integration of economics, literature, cinema	Encourages interdisciplinary learning, connects financial concepts with cultural and literary references	May not appeal to visitors solely interested in finance without an interest in literature/cinema
Gamification	Innovative and entertaining, motivates visitors to improve financial skills through interactive games and rewards	Effectiveness depends on the quality and relevance of the games; may require frequent updates

Participation in financial education month	Promotes public engagement; collaborates with schools and associations to improve financial literacy	Limited by the reach and frequency of events
Initiatives for Primary Schools (*"Monetopoli"*)	Fun for young students, combines video content with practical exercises to reinforce learning	Effectiveness depends on the quality and engagement level of the video content and exercises
Initiatives for Lower Secondary Schools (*"Alla ricerca del salvadanaio"*)	Teaches critical thinking and information verification through interactive challenges	May be challenging to ensure that all students grasp the concepts equally well
Initiatives for Upper Secondary Schools (*"Economia per tutti"*)	Promotes critical analysis and understanding of economic information	Requires a high level of supervision to ensure students are properly guided and supported

Table 6: Strengths and Weaknesses of *Museo del Risparmio* Initiatives

2.2.2 The Role of ONEEF in Advancing Financial Education Across Italy

L'Osservatorio Nazionale di Educazione Economica Finanziaria ("National Observatory for Economic and Financial Education"), indicated by the acronym ONEEF, is an institution created by the Università degli Studi di Milano Bicocca and FEduF (*Fondazione per l'Educazione Finanziaria e al Risparmio*).

ONEEF focuses on the systematic observation, analysis, and promotion of economic and financial education in Italy. It aims to advance financial literacy and education across various segments of the population.

The Observatory engages in comprehensive research and observational activities to assess the state of economic and financial education in Italy. Through empirical studies and data collection, the organization seeks to understand the current level of financial literacy, identify areas for improvement, and evaluate the effectiveness of existing educational initiatives.

ONEEF adopts an interdisciplinary approach, drawing on insights from economics, finance, education, and psychology. It collaborates with various stakeholders, including educational institutions such as the University of Udine, the Ministry of Education, University and Research, and other non-profit organizations.

Over the past few years, there has been a notable surge in financial education initiatives and programs, particularly in nations with well-developed economies.

Given this increase, it has become imperative to document the diverse financial education initiatives supported by public, private, and nonprofit entities.

The initial results of the international mappings have highlighted what has already emerged from empirical studies (Grifoni and Messy, 2012). Specifically, it has been observed that certain financial literacy initiatives overlap, indicating situations where multiple entities have introduced comparable programs aimed at the identical group of beneficiaries.

Going further, ONEEF aims to accomplish two primary goals. First of all, it attempts to create an extensive database of programs implemented in Italy with the goal of promoting financial and economic literacy across various demographic groups. You may report this program by utilizing the

"Report a Program" section of their website, which is available for free. Second, through the "Find a Program" section of the same website, it seeks to increase the exposure of programs that adhere to the requirements established by the Scientific Committee.

These features are complemented by the "Publications" page, which provides a curated collection of papers, reports, and books that pertain to economic and financial education.

In the way it conducts reviews and surveys on financial education initiatives in Italy, ONEEF presents some specificities, particularly:

- An inclusive approach to gathering information on programs implemented in Italy. While past experiences relied on a self-administered questionnaire filled out by the promoting entities identified through a list of schools provided by the ministry (Farsagli, 2013), or through announcements in select newspapers and on the Bank of Italy and the Committee for the Planning and Coordination of Financial Education Activities websites. This approach involves four main processes: regular keyword searches on Google (such as "financial education" and "financial well-being"); ongoing review of academic literature on financial education, financial literacy, and related topics in Italy; networking (including ONEEF researchers' participation in conferences, workshops, and seminars);

- A multidisciplinary approach, which is evident in the composition of its Scientific Committee, the workshops it organizes, and the publications it produces;

- A database with transparent admission criteria. In essence, only programs fulfilling the subsequent conditions are exhibited: they must be offered free of charge (essential for enabling inclusivity), they must feature a contact email for the promoting entity, they must provide a public web link containing the program details;

- A precise categorization is needed to differentiate financial education projects. Although in this work the terms "program" and "initiative" have been used interchangeably, in Table 7 the precise categorization suggested by the observatory is provided.

Program	Educational projects with a specific focus on economic or financial education. They possess the following features: • Consist of a minimum of two sessions or educational modules (conducted either in person or virtually); • Clearly defined and publicly accessible educational objectives; • Allow for participant interaction with instructors or the sponsoring organization throughout the program's duration, facilitating inquiries or clarifications regarding the content.
Initiative	An individual initiative dedicated to economic and financial education that typically involves the presence of at least one expert or instructor, who can be available in either in-person or virtual/distance mode.
Resource	When considering resources, options may encompass books, videos, CD-ROMs, or websites. The primary attribute lies in the material's accessibility, which isn't inherently linked to a particular program or initiative.

Table 7: Classification of financial education initiatives recommended by ONEEF in 2018

To provide a broad perspective, based on a mapping carried out by the observatory from January to December 2018, approximately 40% of the activities are classified as "initiatives" (usually of short duration, frequently less than 2 hours), while 22% are categorized as "resources" (comprising online videos, CD-ROMs, free printed materials, and websites).

To provide an even more extensive overview of programs, initiatives, and resources promoted in Italy, the following table shows the results of the ONEEF surveys for the period 2019-2020, compared with 2018.

CATEGORY	ONEEF 2018 *Frequency*	ONEEF 2018 *Percentage*	ONEEF 2019-2020 *Frequency*	ONEEF 2019-2020 *Percentage*
Program	87	29,7%	88	31,4%
Resource	65	22,2%	56	20%
Initiative	117	39,9%	128	45,7%
Other	24	8,2%	8	2,9%
Total	293	100%	280	100%

Table 8: Financial education activity types categorized by ONEEF reporting year

After conducting extensive analyses of the presentation texts provided by organizations, it is evident that the term "program" is sometimes used without clearly defining the educational objectives. In fact, clear definitions are found in only 20% of cases (with 40% being generic and another 40% being highly generic).

The data gathered by the ONEEF observatory reveals other noteworthy trends. Predominantly, initiatives have been concentrated in the northern region, particularly in Lombardy, where 10.8% of the initiatives are implemented, and where financial literacy levels are relatively higher.

This concentration may exacerbate territorial disparities, emphasizing the importance of a national strategy, adopted by Italy since 2017.

In terms of monitoring and evaluating the activities undertaken, it seems that merely 4.7% have undertaken assessments (using methods like impact analysis, counterfactual evaluation, and pre-post

evaluation) for the year 2018 or earlier years. Conversely, in almost 62% of instances, organizations did not furnish any feedback on this issue, nor were any online resources discovered pertaining to the subject, implying the absence of monitoring or evaluation activities (Baglioni et al., 2019).

In the following table, I have summarized some potential strengths and weaknesses for each initiative mentioned in the paragraph according to my perspective.

Initiative	**Strengths**	**Weaknesses**
Systematic observation and analysis	Research and data collection to assess financial literacy; interdisciplinary approach; collaborations with various stakeholders	Overlapping initiatives leading to redundancy; lack of monitoring and evaluation in many instances
Extensive database creation	Facilitates the promotion and accessibility of financial literacy programs; transparent admission criteria for programs	Requires significant resources and coordination to maintain up-to-date information
Categorization of Financial Education Activities	Clear classification of programs, initiatives, and resources; helps in differentiating types of educational activities	Sometimes ambiguous definitions of “program” and “initiative”; needs more precise definitions to avoid confusion

Table 9: Strengths and Weaknesses of ONEEF Initiatives

2.2.3 FEduF's Efforts in Promoting Financial Literacy

Fondazione per l'Educazione Finanziaria e al Risparmio ("Foundation for Financial Education and Savings"), indicated by the acronym FEduF, founded in 2014 by *Associazione Bancaria Italiana* ("Italian Banking Association") is an organization dedicated to promoting financial education and savings culture among individuals and communities in Italy.

The foundation emphasizes the importance of financial literacy as a fundamental skill for navigating today's complex financial landscape. It promotes a culture of savings, encouraging individuals to adopt prudent financial habits and prioritize saving for future goals. By instilling the value of saving from an early age, the foundation aims to help people build financial resilience and security over time.

FEduF collaborates with schools, universities, financial institutions, and other organizations to deliver financial education programs and initiatives to diverse audiences across Italy.

The foundation hosts numerous financial education initiatives, where the term "program" aligns precisely with ONEEF's definition provided in the preceding paragraph, such as:

- "Kids", developed through a partnership involving the Nord Milano Foundation, the Catholic University, and the School of Civil Economics, is an educational initiative tailored for primary schools. It aims to instill in children a thoughtful consideration of the significance of money and the necessity of responsible management, benefiting both individuals and society. Furthermore, it elucidates the correlation between employment and income, the role of taxes, the operations of financial institutions, and diverse payment modalities.

- "Junior" is a program designed to familiarize middle school students with economic and financial concepts, stimulating them to contemplate finance's core functions and how it

influences people's everyday experiences. The program addresses themes such as the correlation between employment, income, and spending, as well as portraying the household economic cycle by handling essential and optional expenditures, productive savings, investments, and risks. Additionally, it covers financial markets and banking.

- "Teens", targeting all types of secondary schools, consists of four modules. The initial module centers on labor, earnings, and expenditure, while the subsequent module explores the realms of savings and investments, emphasizing productive saving, investment instruments, financial tools, risk assessment, returns, and mutual concepts. The third module dissects the functions of banks and financial markets, alongside examining money flow dynamics. Furthermore, instructors have the autonomy to integrate supplementary modules for a comprehensive exploration of themes like globalization, legality, usury prevention, and managing over-indebtedness.

The start of the 2024-25 academic year will mark the integration of financial education programs and instructional resources into schools. This coincides with the inclusion of the subject in the curriculum through civic education instruction. The programs designed by the foundation are precisely tailored for this purpose.

In the following table, I have summarized some potential strengths and weaknesses for each initiative mentioned in the paragraph according to my perspective.

Initiative	Strengths	Weaknesses
“Kids” program	Tailored for primary schools, making financial education accessible to young children; covers fundamental financial concepts	May oversimplify concepts, potentially
“Junior” program	Designed for middle school students, bridging the gap between basic and advanced financial concepts; addresses practical themes	Could be challenging to engage middle school students deeply in financial topics
“Teens” program	Complete program for secondary schools; allows instructors to integrate additional modules on important themes	The complexity of content may be overwhelming for some students; requires skilled instructors to effectively teach and engage students
Integration with school curriculum	Ensures that financial education is systematically included in the school curriculum; provides structured and tailored programs for different educational levels, promoting long-term financial literacy	Dependence on schools’ willingness to adopt and effectively implement the programs; potential variability in the quality of implementation across different schools and regions

Collaboration with educational institutions	Extends reach and impact of financial education by partnering with universities and other organizations	Reliance on external partnerships may limit control over program content and delivery; coordination with multiple partners could lead to inconsistencies in program execution and quality

Table 10: Strengths and Weaknesses of FEduF Initiatives

3. Analysis of Financial Education Initiatives and Their Impact on Financial Behavior

This chapter examines three significant financial education initiatives that have demonstrated a positive impact on their target audiences. By examining these initiatives, it aims to provide insights into their design, implementation, and impact, offering a clear understanding of strategies that may be effective in improving financial literacy levels in Italy.

This diversity among the three initiatives in the chapter can provide an extensive view of different strategies utilized in financial education and the broadness of aspects that may be considered in educational initiatives. Especially behavioral aspects are rarely considered, and even more rarely, they present measurements of the effects.

The first paragraph, “The Economics Cake: Engaging Financial Education for Youth” explores a program specifically tailored for young learners, examining how it engages and educates its audience.

The second paragraph, “Financial Literacy by Design: A Behavioral Perspective” investigates an experiment that aims to understand the impact of the digital context on financial decisions taken by experts.

The third paragraph “The Gender Differences in Financial Education Initiative: Exploring the Impact on Impatience and Choice Consistency” focuses on a program that examines the distinct learning patterns and outcomes between boys and girls in financial education, highlighting the importance of tailoring financial literacy programs to address gender-specific needs and behaviors.

3.1 The Economics Cake: Engaging financial education for youth

This study by Rinaldi and Argentin is part of the approximately 5% of initiatives that also conduct impact assessments, aiming to measure the effectiveness of the initiative rather than just providing information and completing the program. So, in the following paragraph, we will carefully examine these evaluations and try to reach some conclusions.

It starts from the principle of the growing importance of social capital, and therefore not just economic capital. Social capital is defined as Pierre Bourdieu describes it: "The sum of the resources, real or virtual, that come to an individual or a group from being part of long-lasting networks of more or less institutionalized relationships of mutual knowing and recognition" (Bourdieu, Wacquant, 1992).

In this model, social capital is based on the fact that individuals, in their relationships, go beyond their own personal interests and take action to provide support and help, not because they expect a reward or reciprocal assistance, but because they believe it is a good thing (De Felice, 2015).

In this context, we aim to explore the importance of financial skills and money, delving into emotional aspects and assessing how possessing these economic capabilities can potentially impact our happiness and overall well-being.

The title of the program, *La Torta dell'Economia* ("The Economics Cake") is inspired by a statement made by a child, who remarked: "If at the birthday party you have a delicious and very expensive cake, but your friends are not there, you're not so happy."

The initiative seeks to educate children about the importance of savings, generosity, financial planning, and solidarity. Specifically developed for students in the 3rd, 4th, and 5th grades of primary

school, this financial literacy program aims to cultivate both a saving mindset and financial stability among young students.

Moreover, it aims to instill in children a pro-social mindset, encouraging them to be aware of the needs of both their immediate social circles (family, peers) and the wider community.

This project focuses on four distinct uses of money as illustrated in Table 11.

Let's consider the actions that Alessandro, a 10-year-old child, can take when he receives 50 euros as a birthday gift from his grandparents. For example, he can choose:			
I.	Savings to purchase an item I desire (short-term SAVINGS)	II.	Savings to give gifts to the people I care about (GIFT)
III.	Savings for future projects, for when I am older (long-term PLANNING)	IV.	Savings to donate a portion of my money to a solidarity, cooperation, or charity initiative (SOLIDARITY)

Table 11: Four different ways of allocating money at the core of the project *La Torta dell'Economia*

These economic behaviors cover a range of complex skills, including the ability to wait for rewards, plan effectively, and control impulses.

Alongside these abilities are distinct social inclinations, from being altruistic to being selfish, and preferences for either tight or expansive social circles. These characteristics are not innate but are developed during children's learning experiences as they grow, as part of their financial education.

This aspect of the project is very interesting, as it helps students understand money not only as a static entity, but as a versatile tool that can be employed in various manners. This awareness leads students

to see money not just as an end in itself but as a vehicle to achieve broader goals, thereby contributing to developing a more concrete and practical understanding of the tool.

At the core of the four behaviors mentioned above, there are two key aspects:

- The first is *temporality*, which is deeply connected to the skills of planning and delaying gratification. By considering the future and taking an active role in financial planning, children can improve both their self-control and their capacity to evaluate the costs and benefits of various economic decisions and behaviors (Rinaldi, 2020).

- The second is *relationality*, which involves the capacity to build close interpersonal relationships through commitment, donating, and reciprocity. Also, engaging in projects that benefit the community is extremely important. These aspects are key factors in determining an individual's "level of happiness" as evidenced by numerous studies on the link between economic income and well-being. Therefore, it is essential to foster two types of altruism: "narrow" altruism, which focuses on close social circles like family and friends and "expansive" altruism, which encompasses broader social connections, including individuals in distant places, communities from diverse nations, and even animals or plants that require protection (Rinaldi, 2020).

At the heart of the project lies the utilization of a uniquely designed money box.

Through the exploration of selected fairy tales, engaging in imaginative activities with fairy tale personas, classroom exercises, and crafting and decorating their own piggy bank, children are introduced to the essence of the four social functions of money.

In the academic year 2016/2017, the initiative was complemented by an evaluation of its educational impact, conducted via a controlled experiment by a team of researchers from the *Università Cattolica del Sacro Cuore* in Milan.

The following figure illustrates an example of a money box presented during the project presentation, which serves as a reference model for its individual construction.

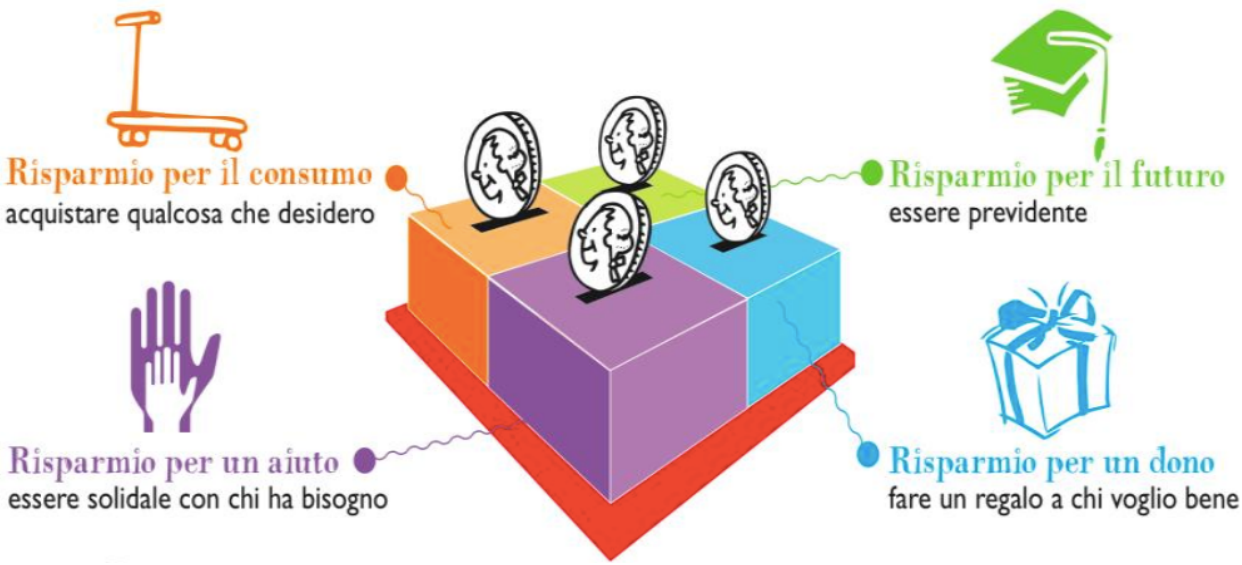


Figure 9: Example of a money box

Source: (Rinaldi, 2020)

The project consisted of three classroom sessions focused on financial education, each lasting approximately two hours. These sessions involved both a professional educator and the teacher, both of whom were dedicated to crafting the money box and engaging in educational activities.

Additionally, two sessions were dedicated to research purposes, involving the distribution of questionnaires in the classroom. Each research session lasted about an hour and included the presence of an observer. One evaluation session occurred prior to the beginning of the educational program, while the other occurred approximately one month after its conclusion.

A distinctive strength of the initiative *La Torta dell'Economia* is its significant experiential component, specifically the construction of a tangible object in the classroom.

The money box is designed as a cake, consisting of four separate slices that can be assembled to form a unified object. Each slice functions as an individual piggy bank, capable of being opened separately from the others.

Initially, the money box is given to the children in a disassembled state. Guided by tutors through specific readings and activities, the children construct and customize their piggy bank with decorations and drawings. This object symbolizes four distinct methods of money allocation: saving, planning, giving, and solidarity.

Compared to other projects conducted in Italy, this initiative has some peculiarities. For example, the project was conceived by an interdisciplinary team, including university researchers, primary school teachers, and facilitators who made the activities as entertaining as possible for children and during the course delivery, the presence of appropriately trained external experts in the classroom. It pays strong attention to the dimension of financial literacy among primary school students according to the literature on the development of children's economic thinking (Lunt, Furnham, 1996; Marchetti

et al., 2016). The project objectives are defined in line with recommendations for improving the quality of design for financial education interventions (e.g., Bongini et al., 2018).

During the 2016/2017 academic year, 10 schools across two Italian regions (8 in Latium and 2 in Lombardy) participated in the project. It engaged 5 facilitators with appropriate training who conducted classroom sessions to execute the educational program. The initiative encompassed 60 classes and approximately 1,220 students, with the distribution detailed in the Table below.

School grade	**Total**
Third grade	18
Fourth grade	22
Fifth grade	20
Total	60
Students present for at least one questionnaire	1,214

Table 12: Sample distribution by classes (School Year 2016/17)

Source: (Rinaldi, 2020)

On average, the three educational interventions were conducted over a period of six weeks, with the intention of spacing out the sessions regularly, typically every two weeks. Participation from schools incurred no fees.

Being able to get an understanding of the positive changes resulting from the project requires more than just comparing students before and after their involvement in the activities.

Additional factors may influence changes over time. Similarly, once the project activities are completed, it is insufficient to compare students who participated with those who did not. Because at the beginning, these two groups might be different, and we might not see the changes we are trying to detect.

These considerations ensure that the analysis aims to prevent significant distortions that the collected data may encounter.

In order to address the recognized risks of estimation bias, researchers utilized a randomized control trial, enabling the comparison of two similar student groups: one receiving the intervention (referred to as the *treatment* group) and another not receiving it (known as the *control* group).

To ensure equivalence, it is necessary that students are assigned randomly and that the sizes of the two groups are adequate. When this requirement is fulfilled, any disparities between the two groups post-intervention won't originate from initial traits or divergent progressions over time, but rather from the intervention's effects. Because of logistical reasons in Rinaldi's project, it would have been impractical to randomize individual children. So, as a solution randomization was applied to classes, resulting in the implementation of a clustered randomized control trial.

The initial measurement of the variables of interest for students in the selected primary schools was carried out by conducting a questionnaire between October and December 2016, prior to the intervention. Following this, 30 classes were randomly assigned to the treatment group and 30 to the control group, guaranteeing grade level equivalence. The *treatment* group classes participated in the *La Torta dell'Economia* intervention, while the *control* group classes did not.

Between January and April 2017, the second post-intervention questionnaire (measuring post-outcomes) was conducted with all classes.

In both the pre- and post-intervention questionnaires, items were included to assess two types of outcomes: the primary outcomes, which the project explicitly aimed to influence, and the secondary outcomes, which were tracked during the evaluation based on the hypothesis that the intervention could affect them, even if that was not its direct aim.

In other words, the project was designed to have effects on what have been defined as *primary outcomes*, but potentially, the project may have also influenced other aspects, which have thus been defined as *secondary*.

Consequently, the primary outcomes are students' comprehension of prices, their degree of financial understanding, their engagement with economics, and their altruistic tendencies (both in general and in specific contexts).

In contrast, secondary outcomes under scrutiny include materialistic tendencies (such as valuing money for happiness and respect, or regarding high earnings as a key factor in the "perfect job"), concerns about commodification anxiety (the idea that money can purchase all, even friendship), and inclination towards saving.

The term *commodification anxiety* refers to the fear experienced by some individuals of a progressive commercialization in contemporary society of various areas of social life that, in the recent past, were

instead perceived as exempt from economic logic (such as romantic relationships, the care of the elderly and children in emotional terms). It is the anxiety about the gradual assigning of a price to every single human interaction or activity, even those considered most sacred (Williams, 2001).

Typically, within this category of randomized analysis, as the number of samples subjected to randomization rises, the likelihood of encountering baseline disparities between the treatment and control groups decreases.

However, due to the limited number of randomized classes in our scenario, it becomes essential to assess whether, by chance, we have encountered an unfavorable instance of non-equivalence. To achieve this, we evaluate the balance between individuals assigned to the treatment group and those assigned to the control group based on certain essential attributes.

The subsequent table presents a comparison of the two student groups across various pertinent characteristics, as shown in Rinaldi's publication (2020).

Characteristic	**Treatment group**	**Control group**
Male (%)	52.0	51.7
Born in Italy (%)	93.9	95.0
Region (%)		
Latium	78.7	79.6
Lombardy	21.3	20.4
More than 100 books at home (%)	28.13	29.1
Deprivation index (mean and SD)	0.96 (0.95)	0.84 (0.99)
Mathematics grade (mean and SD)	8.6 (1.03)	8.6 (1.03)

School class (%)		
Third	30.3	29.8
Fourth	36.1	36.6
Fifth	33.6	33.6
Students with at least one questionnaire	617	597
of whom also completed the post-questionnaire	443	428

Table 13: Comparison between students assigned to the treatment group and those in the control group.

The equivalence between the two groups is evident concerning grade level and geographical area, attributable to class randomization. Additionally, parity exists across all other examined attributes, encompassing gender distribution, birthplace, average math grades, the proportion of students with over 100 books at home, and the mean deprivation index, which measures familial financial difficulties suggesting conditions close to poverty. While a slight disparity is observed in the latter measure between the groups, it lacks statistical significance.

In Table 14 (data from Rinaldi, 2020), the effects produced by *La Torta dell'Economia* on the project outcomes are reported. It is noted that two of the primary outcomes (interest in economics and general altruism) were modified by the intervention in the desired direction, even though with modest impacts.

Outcome indices	Effect on treated	Standard Error of the effect	p-value
Primary outcomes			
Financial literacy	0.1	0.1	0.15
Knowledge of prices	0.1	0.1	0.34
Interest in economics	0.7***	0.2	0.00

General altruism	0.2*	0.1	0.09
Narrow altruism	0.1	0.1	0.50
Broad altruism	0.0	0.1	0.99
Secondary outcomes			
Materialism	0.2	0.2	0.41
Commodification anxiety	−0.1	0.1	0.11
Propensity to save	0.2	0.2	0.20

Table 14: Estimates of the intervention effects on outcomes (coefficients from OLS regression models)

Significance levels: ***p<0.01; **p<0.05; *p<0.1

Students exposed to the intervention show increased interest in economics and slightly improved altruistic behavior. Nevertheless, no substantial change related to the intervention is noted concerning broader altruism.

Furthermore, the impacts on secondary outcomes are even more modest and uncertain: we detect a minor decrease in commodification anxiety, which is marginally significant.

Finally, alongside the controlled experimentation, twelve interviews were conducted with key participants to identify the project's strengths and areas for improvement, aiming to optimize its future outcomes.

In qualitative interviews, educators and facilitators have emphasized various strengths of the project. These include its ability to captivate students' interest in covered topics and the clarity of exercises

and examples within educational materials. Moreover, students are given a platform to express their desires in terms of consumption. This includes individual aspirations, ranging from saving for significant investments like a house to purchasing high-quality cameras for potential careers as YouTubers. Additionally, students engage in fundraising activities for noteworthy projects like the reconstruction of the Morandi Bridge in Genoa.

In conclusion, the evaluation research for the 2016/2017 school year indicates that the project positively influenced participants by increasing their interest in economics, improving financial literacy, and reinforcing attitudes toward using money to help others. Although these effects are modest, they represent small seeds planted by the intervention, which may grow over time and alter students' perspectives on the economic world.

The coordinators of the project did not plan to assess the effects of the intervention over an extended period, such as one year later. In terms of evaluation, successfully implementing a controlled experiment in an area where this is not standard practice is worthy of note. However, it would be even more valuable to try to estimate the long-term effects (e.g., one year later).

Recognizing the difficulty of impacting some aspects of financial education, especially attitudes and behaviors, which are challenging to change, as noted in behavioral economics and finance studies, it appears beneficial to continue and strengthen this type of intervention.

3.2 Financial Literacy by Design: A Behavioral Perspective

This study by Alessandro Ceccarelli, titled *Financial Literacy by Design: Una Prospettiva Comportamentale* ("Financial Literacy by Design: A Behavioral Perspective") seeks to analyze the financial choices of experts, that is, people for whom basic financial literacy knowledge is not a limitation, but rather a specific competence.

The framework under consideration can be applied in Italy and integrated into financial education programs to increase the level of financial literacy among the population in our country.

Most of the financial education initiatives or programs analyzed aim to improve the participants' basic financial knowledge, in the hope that these individuals will then improve their financial decision-making to some extent. However, the behavioral aspect is rarely taken into consideration.

This kind of initiatives is based on a well-known principle: by enhancing an individual's understanding and knowledge, their behavior and decision-making quality are improved. Nonetheless, decades of research in behavioral economics have shown that *context matters*. Even elements of the environment that appear insignificant can significantly impact the way individuals behave and make decisions (Della Vigna, 2009).

In our era, out of the approximately 35,000 decisions we make daily (Sahakian, Labuzetta, 2013), many are now made online, and almost certainly with a smartphone in hand: from choosing where to direct our attention, which news to read, which advertisement to click on, to shopping, traveling, and even signing up for financial services.

The influence of context risks being amplified in digital contexts: smartphones, web platforms, and algorithms effectively become the primary tools of information and decision-making. In most Google

searches, we click on one of the first three results: the web is considered the realm of freedom of choice and the triumph of information, while in reality, we are strongly conditioned by how the algorithm selects and represents information.

We live in a paradoxical age where the excess of information makes it challenging for individuals to process all available content. As a result, we are driven to confine ourselves to the most prominent information on search engines, social networks, and other platforms we interact with. Therefore, we must question whether initiatives solely based on information are adequate. There might be a need to develop new approaches that also consider the decision-making mechanisms underlying financial choices, considering the role of the context in which these decisions are made.

Based on the findings of an experiment conducted by Alessandro Ceccarelli at the London School of Economics and Political Science, the paragraph proposes elements of reflection. It also suggests possible complementary frameworks for supporting interventions aimed at improving financial literacy among the population in Italy.

As widely recognized, behavioral economics, by applying concepts and findings from psychological research to economic and financial choices, has shown how individual decisions are not always guided by perfect rationality but are often influenced by heuristics and behavioral biases (Kahneman, Tversky, 1979).

Since 2013, the OECD has been backing institutions that have started implementing tangible applications of principles and insights derived from behavioral sciences, under the *Behavioral Insights* umbrella, aiming to improve public policies across various areas such as environmental protection, healthcare, and the financial welfare of individuals.

As part of this initiative, the OECD promotes the *BASIC* framework (Behavior, Analysis, Strategy, Intervention, Change) and additional complementary toolkits. These resources aim to facilitate the implementation and evaluation of policy initiatives based on behavioral economics principles.

In particular, I want to mention the *MINDSPACE* framework, which defines the nine most robust effects that influence our behavior automatically and outside our awareness.

The Table 15 below briefly explains these nine effects that influence our behavior according to the framework.

MINDSPACE framework	
Messenger	We are strongly influenced by who communicates the information
Incentive	We respond to incentives influenced by factors other than costs and prices
Norms	We are greatly influenced by what others do
Defaults	We passively accept the default option
Salience	We are influenced by what captures our attention
Priming	Our behavior is altered on a subconscious level by the images we are exposed to
Affect	Emotions strongly influence our actions
Commitment	We have difficulty committing to long-term goals
Ego	We act in a way that makes us feel good about ourselves

Table 15: *MINDSPACE* framework

This framework can be applied in both the governmental and private sectors to evaluate specific components or toolboxes containing various interventions as part of experimental financial education initiatives.

In this experiment, the aim is to understand how the online context can influence the financial decisions of experts. This is done through a *Randomized Controlled Experiment* based on the *MINDSPACE* framework.

This framework is a behavior change model designed to influence human decisions through nine key principles, as illustrated in Table 15: Messenger, Incentives, Norms, Defaults, Salience, Priming, Affect, Commitments, and Ego. Developed by the UK Cabinet Office in collaboration with the Institute for Government and leading academics, it integrates behavioral science into policy making. By focusing on automatic processes of judgment and influence, *MINDSPACE* helps policymakers design more effective interventions by considering the subconscious factors that drive behavior. This model has been widely adopted globally and is used to improve public policies and services.

Specifically, by using *MINDSPACE*, the author seeks to determine in this experiment whether the online context can affect the financial choices made by employees of banks and other financial institutions.

In other words, it analyzes whether higher-than-average levels of financial literacy, as can be expected from employees in the banking and financial sectors, are capable of neutralizing the influence of the online context on financial decisions.

These questions were addressed through an experiment conducted by Alessandro Ceccarelli at the end of 2018 as part of the *Executive MSc in Behavioral Science* program at the *London School of Economics and Political Science*. The research was supervised by Matteo Maria Galizzi, Associate Professor at the Department of Psychological and Behavioral Science, overseen by Professor Paul Dolan, one of the authors of *MINDSPACE*.

As highlighted in the introductory chapter of this thesis, in developed countries, the shift towards contributory pension systems has resulted in a notable transfer of decision-making responsibility to individuals. Governments and other public institutions are increasingly alarmed, not just by workers' contributions towards their retirement, but also by the adequacy of their financial decisions in shaping pension plans.

According to CONSOB data, at the end of 2017, it emerged that taxpayers mainly allocated their funds to guaranteed sectors (44%) and balanced lines (38%). While bond and equity sectors represented only 12% and 6%, respectively.

From this data, it would seem that individuals tend to be risk-averse and more inclined towards investment sectors capable of guaranteeing a minimum return or that otherwise allow for an overall risk mitigation through a balance of different components.

In the present era, digital environments have become the predominant arenas where subscribers assess the diverse financial tools available and scrutinize the information disseminated by intermediaries. Hence, there emerges an urgent need to understand how *non-informative* elements within this context, such as images, videos, and seemingly trivial details, affect investors' financial decisions.

Starting from these assumptions, the experiment aimed to investigate whether exposure to images evoking a sense of luxury or wealth, coupled with clear social comparisons, could lead professionals to statistically significant changes in their financial preferences and investment objectives.

Moreover, considering whether exposure through *priming* to concepts related to a wealthy lifestyle can consequently lead professionals to be more optimistic about their pension gap and, subsequently, be more motivated to contribute to the defined pension plan.

Using a randomization process similar to that implemented in the *"La Torta dell'Economia"* project evaluation, 209 participants in this experiment were divided into two experimental groups: one receiving the treatment and the other serving as a control. Following this, professionals from both groups were asked to create an asset allocation for a pension plan, allowing them to freely distribute among three categories: equity (100% stocks), bonds (100% bonds), and balanced (50% stocks and 50% bonds). They were then instructed to determine a contribution level for this plan, considering their income levels, time frame, and expected pension gap.

Traditional economic theory suggests that individuals with a satisfactory level of financial literacy should base their financial decisions on factors such as time horizon, pension gap, and risk propensity. Both groups of participants participated in an initial survey phase designed to assess demographic details, professional backgrounds, attitudes towards risk, and numerical skills. Additionally, they were provided with a tool to compute their pension gap. On the other hand, only the treatment-exposed group benefited from the application of a behavioral toolbox, which concurrently examined three aspects of *MINDSPACE*: *priming*, *salience*, and *norms*.

With regard to *priming*, empirical research has focused on the impact of luxury-related imagery and an enhanced quality of life on shaping the inclination towards risk in investment choices (Chartrand et al., 2008; Kirk, McSherry, 2012). Expanding on these ideas, the experiment included showing treated subjects images representing wealth and luxury before they made their own investment decisions. This was done using videos and pictures displayed with the products.

Secondly, regarding the concept of salience, other studies have documented how even the names of financial products, if made to evoke positive concepts linked to opportunities and a better future, can influence risk propensity (Gilad, Kliger, 2008). In the current experiment, the author made evident in the naming of investment funds the concepts of growth and value, as well as dynamism, while obscuring the technical concepts related to the inherent risk in financial instruments (stocks, bonds, balanced funds). This approach is supported by Gennaioli's findings, which highlight that salient

stimuli attract attention due to their high contrast with surroundings, their surprising nature, or their prominence. This bottom-up attention can distort economic choices by distracting decision-makers from relevant attributes (Bordalo, Gennaioli, & Shleifer, 2022). In this context, the strategic use of salience in naming financial products can lead to an overemphasis on positive attributes while underweighting associated risks, thus influencing investment decisions.

And lastly, regarding the concept of *norms*. Relevant studies have highlighted that exposing individuals to communications reflecting others' actions in similar situations proves more effective than direct instructions on how to act in that specific circumstance (Tetlock, 1985; Cialdini et al., 2006). During the experiment, participants subjected to the treatment and with a temporal horizon exceeding twenty years were provided with data in percentage form concerning their peers' financial decisions.

All recorded variables were subjected to analysis using a linear regression model, with the aim of identifying causal connections between the implementation of the toolbox and the financial behavior of employees within banks and similar financial entities.

Using multiple linear regression models, it was possible to measure the causal impact of non-informative variations, such as the manipulation of videos, materials, compartment names, and social comparison, on the web page where participants made their financial decisions. These variations influenced each dependent variable:

- the percentage of the equity compartment;
- bond compartment;
- balanced compartment.

Nonetheless, the financial decisions of participants in the two observed groups could have differed due to varying personal characteristics or risk attitudes.

Therefore, the regression analyses included controls for demographic variables, education levels, company affiliation, work sector, risk aversion, and numeracy levels.

Participants exposed to the behavioral toolbox, a set of strategies designed to influence financial decision-making by leveraging cognitive and emotional factors, tended to allocate less to the balanced compartment of their portfolios. This underweighting suggests that the toolbox influenced their perception of risk and return, making them less inclined to choose a diversified option. Additionally, there was a marginally significant trend towards overweighting equities, indicating a preference for higher risk and potential returns. This shift in allocation reflects an altered risk appetite as a result of the behavioral intervention. However, the toolbox did not significantly affect their choice regarding the bond compartment, suggesting that their perception and decision-making process for fixed-income investments remained unchanged (Refrigeri, Rinaldi, Moiso, 2020).

As indicated in Table 16 (Refrigeri, 2020), the treatment has a statistically significant negative effect on the balanced compartment, with p-values consistently below the 0.05 threshold, even after accounting for all other variables. This indicates that participants exposed to the treatment significantly decreased the balanced compartment in their portfolios.

Multiple linear regression models: Balanced								
	Balanced	Balanced	Balanced	Balanced	Balanced	Balanced	Balanced	Balanced
Treatment	-8.505**	-8.628**	-8.669**	-8.944**	-8.572**	-8.775**	-9.065**	-9.229**
	(4.155)	(4.162)	(4.183)	(4.222)	(4.204)	(4.229)	(4.213)	(4.211)
Gender		3.349	3.294	3.251	3.615	3.586	3.548	3.632
		(4.224)	(4.253)	(4.263)	(4.245)	(4.254)	(4.235)	(4.231)
Age			-0.0368	-0.0806	-0.0224	-0.0299	-0.0512	-0.0453
			(241)	(254)	(255)	(256)	(255)	(255)
Education				-1.174	-1.336	-1.325	-1.603	-1.706
				(2.116)	(2.107)	(2.112)	(2.109)	(2.109)
Company					-0.558*	-517	-499	-488
					(335)	(344)	(342)	(342)
Department						239	246	248
						(429)	(427)	(426)
Numeracy							5.75	6.013
							(3.634)	(3.638)
Riskaversion								1.434
								(1.233)
Constant	44.22***	39.55***	41.22***	45.89***	49.19***	47.46***	37.60**	32.69*
	(2.893)	(6.568)	(12.81)	(15.35)	(15.39)	(15.73)	(16.85)	(17.36)
Observations	167	167	167	167	167	167	167	167
R-squared	0.025	0.028	0.029	0.03	0.047	0.049	0.063	0.071
Adjusted R^2	0.019	0.017	0.011	0.07	0.017	0.013	0.022	0.024

Table 16: Multiple linear regression model - Balanced. Standard error in parentheses.
Significance levels: ***p<0.01; **p<0.05; *p<0.1

As evidenced in Table 17 (Refrigeri, 2020), the treatment had a statistically significant positive impact on the financial behaviors of participants regarding the proportion of the equity compartment in their portfolios.

However, in this case, the cause-effect relationship becomes marginally significant after controlling for all other variables (with p-values still below the 0.01 threshold in all observations). This suggests that participants exposed to the treatment were significantly induced (with a p-value of 0.01) to increase the equity compartment in their portfolios.

Multiple linear regression models: Stock								
	Stock	Stock	Stock	Stock	Stock	Stock	Stock	Stock
Treatment	5.688*	5.752*	5.335	5.731*	5.063	5.259*	5.287*	5.368*
	(3.257)	(3.267)	(3.245)	(3.267)	(3.128)	(3.144)	(3.157)	(3.162)
Gender		-1.751	-2.312	-2.251	-2.904	-2.876	-2.873	-2.914
		(3.315)	(3.299)	(3.298)	(3.158)	(3.163)	(3.172)	(3.177)
Age			-0.370**	-307	-0.412**	-0.405**	-0.402**	-0.405**
			(187)	(197)	(190)	(191)	(191)	(192)
Education				1.695	1.985	1.974	2.001	2.052
				(1.638)	(1.568)	(1.570)	(1.580)	(1.584)
Company					1.003***	0.963***	0.962***	0.956***
					(249)	(256)	(257)	(257)
Department						-231	-232	-232
						(319)	(320)	(320)
Numeracy							-558	-688
							(2.723)	(2.732)
Riskaversion								-709
								(926)
Constant	22.55***	24.99***	41.86***	35.13***	29.20**	30.87***	31.83**	34.25***
	(2.268)	(5.155)	(9.939)	(11.88)	(11.45)	(11.70)	(12.63)	(13.03)
Observations	167	167	167	167	167	167	167	167
R-squared	0.018	0.020	0.043	0.049	0.136	0.139	0.139	0.142
Adjusted R^2	0.012	0.008	0.025	0.026	0.109	0.107	0.101	0.099

Table 17: Multiple linear regression model - Stock. Standard error in parentheses.
Significance levels: ***p<0.01; **p<0.05; *p<0.1

The observed outcomes suggest that subjects would be induced to modify their risk propensity in the moment through a mechanism of *unconscious goal setting*. This implies that exposure to images portraying a favorable and prosperous future result in the establishment of higher personal aspirations, consequently leading to a greater readiness to engage in increased financial risk-taking.

The experimental design, which clearly relies on hypothetical financial decisions, coupled with the size and characteristics of the surveyed population, precludes generalizations. Professionals were tasked with developing an asset allocation for a pension plan, choosing freely among three components: equities (100% stocks), bonds (100% bonds), and balanced (50% stocks and 50% bonds), and were then asked to determine a contribution level for the plan based on their income level, time horizon, and expected pension gap. Nonetheless, it seems to demonstrate that, despite the

abundance of information available, making *informed choices* does not necessarily translate into making *better choices* even among individuals with acceptable levels of financial literacy.

Quoting Herbert A. Simon: "A wealth of information creates a poverty of attention". This quote is even more valid today than in 1971 when Simon originally expressed the concept.

We have never lived in a world inundated with information as it is today, and most of the time, we conclude our days as we begin them: with a smartphone in hand. The stimuli and information our minds continuously confront far surpasses its processing capacity (Benartzi, 2015).

It is worth mentioning that the experiment aligns with the broader literature by Shleifer and Gennaioli, along with Bordalo, who have extensively studied the role of salience, norms, and memory in decision-making processes. Specifically, in their working paper "Memory, Attention, and Choice", they present a theory that highlights how norms and salience influence attention and choices. They argue that individuals recall past experiences based on similarity, and surprising deviations from these norms attract more attention, thereby impacting decision-making (Bordalo, Gennaioli, and Shleifer, 2020).

In the context of this experiment, the author applied these insights by manipulating the naming of investment funds to emphasize concepts of growth, value, and dynamism while downplaying the associated risks. This approach leverages the concept of salience as described by Gennaioli et al., where salient stimuli, such as positive and evocative names, can disproportionately attract attention and influence financial decisions. By obscuring the technical aspects related to risk, the experiment aims to observe if the enhanced salience of positive attributes affects the financial choices of the participants. This methodology not only tests the practical applications of behavioral insights but also contributes to understanding how memory and attention dynamics can shape financial behaviors in a professional setting (Bordalo, Gennaioli, and Shleifer, 2020).

Finally, the experiment presented, together with the extensive and rigorous scientific literature on the topic, highlights the vital need to systematically implement controlled experiments.

In Italy, the impact assessments of financial education interventions are still far from being widely implemented. This gap highlights a significant opportunity for improvement in how we design and evaluate such programs.

A deep understanding of human behavior is essential and should be at the core of designing both public and private interventions. By focusing on behavioral insights, we can ensure that resources are allocated to solutions that have been demonstrated to work effectively.

3.3 The Gender Differences in Financial Education Initiative: Exploring the Impact on Impatience and Choice Consistency

The following case study has been selected based on a significant meta-analysis conducted by Kaiser et al. (2022), which grouped several relevant financial education experiments from around the world. By extracting only, the interventions focusing on Italy, we obtained the data presented in the Table 18 below.

Experiment	Sample mean age	Sample size	Outcomes
Becchetti and Pisani (2012)	18	3820	A
Becchetti et al. (2013)	18	1063	A, D
Billari et al. (2017)	44	1436	A
Brugiavini et al. (2015) [independent sample 1]	23	104	A, D
Brugiavini et al. (2015) [independent sample 2]	23	642	A, D

Migheli and Moscarola (2017)	9	213	D

Table 18: Overview of Selected Experiments in Italy from Kaiser et al. (2022).

Notes: Outcomes are coded as follows: A (financial knowledge), B (credit behavior), C (budgeting behavior), D (saving and investing behavior), E (insurance behavior), and F (remittance behavior).

I chose to focus on the experiment conducted by Migheli and Moscarola because, among the other relevant studies grouped by Kaiser, it is a case study as recent as Billari et al. but with a specific emphasis on saving and investing behavior. Despite the smaller sample size in comparison to other major studies, the focus on saving and investing behavior provides valuable insights.

Savings play a key role in the economic and financial literacy programs implemented across various countries. Standard microeconomic theory suggests that savings depend on the opportunity cost of money, represented by the market interest rate, and the individual's level of patience (Strulik, 2012).

Patience is a desirable trait in terms of economic behaviors and outcomes. Research shows that individuals who exhibit higher levels of patience tend to experience better job market success (DellaVigna and Paserman, 2005; Munasinghe and Nachum, 2006), enroll in pension programs earlier (Fang and Silverman, 2006), and make decisions that positively impact their country's economic development, as opposed to those made by less patient individuals (Bauer and Chytilová, 2013).

Similarly, research indicates that children with higher levels of patience put more effort into studying and achieve greater educational success compared to their peers (Mischel et al., 1989). These children also tend to save more (Carlin and Robinson, 2012) and are more likely to adopt healthy habits (Sutter

et al., 2013). This study evaluates the effectiveness of a savings economics program designed for children aged 8–9.

To achieve this goal, the initiative's organizers asked children to make a series of intertemporal choices. They then measured the children's patience levels and the consistency of their responses. The Museum of Savings (MdR) developed a savings economics program, which was implemented and evaluated for its effectiveness, including an investigation into gender differences in learning and behavior.

The program includes a one-hour laboratory session accompanied by a brief explanation of what saving means and its potential uses. Observations were made of the children both before and after the intervention. It is important to note that social and psychological traits at the individual level can sometimes challenge the positive impact of financial literacy on individual choices (Fernandes et al., 2014).

However, the key question remains: when should financial education begin in an individual's life? Otto et al. (2006) demonstrated that children between the ages of 6 and 9 already understand the concept of saving and can allocate their money to savings programs. This finding supports the idea that financial education should start early in life.

Strategies for educating young people remain controversial and varied. Experimental evidence suggests that the effectiveness of financial education courses is independent of their length (Brugiavini et al., 2015).

This study focuses on a program about the economics of savings that not only imparts basic economic and financial concepts to children but also measures and influences their level of patience. Time preferences, which are characterized by patience, are vital in theories of savings and investment, economic growth, interest rate determination, and asset pricing (Becker and Mulligan, 1997, p. 729).

Additionally, Bettinger and Slonim (2007) found that boys aged 5 to 16 are more impatient than girls, and mathematical scores at school do not predict levels of patience (Andersen et al., 2008).

The test was conducted in the field on a sample of third- and fourth-year students from five primary schools in Torino and Moncalieri. After the headmaster agreed to participate, they selected a class for the study. Although this selection process was not entirely random, the headmaster might have chosen the best class to present a favorable impression of the school. The children were unaware of the study's aims, and the procedure was consistent across all participating schools.

The test consisted of four phases. In the first phase, the children completed a basic socio-demographic questionnaire at home with their parents' assistance. The second phase took place in the classroom, where the children participated in a game (Game-P henceforth) designed to measure their patience levels. Game-P involved answering the questions listed in the Table 19 below.

	Option A You receive … candies tomorrow	Option B You receive … candies in 1 month	ANSWER Do you prefer A or B?
Row 1	10 candies	11 candies	
Row 2	10 candies	12 candies	

Row 3	10 candies	13 candies	
Row 4	10 candies	14 candies	
Row 5	10 candies	15 candies	
Row 6	10 candies	16 candies	
Row 7	10 candies	17 candies	
Row 8	10 candies	18 candies	
Row 9	10 candies	19 candies	
Row 10	10 candies	20 candies	

Table 19: Game-P

The initial choice presented to the subjects asks whether they would prefer to receive 10 candies the next day (choice A) or 11 candies in one month (choice B). After that choices follow the same format, with the reward for waiting gradually increasing up to 20 candies.

The third phase, conducted one week later, constitutes what we refer to as the "treatment". Designed by the *Museo del Risparmio* (MdR), this phase involves a one-hour laboratory session aimed at familiarizing children with the concept and benefits of saving. Initially, children are asked to draw something they wish to have, which could be a material item (such as a toy, new shoes, or a bicycle), a pet (like a dog, cat, or hamster), or another market-purchasable item (for example, a video game, concert ticket, or travel experience).

After completing their drawings, the children gather in front of a board, where a researcher guides them through examples to reflect on the amount of money needed to realize their desires. The children learn that their weekly pocket money is often insufficient for immediate purchases but can accumulate over time through saving.

In the fourth phase, conducted in the MdR laboratory immediately following phase three, the children play Game-P again. However, not all the children participate in all four phases. A subset of them only

plays Game-P twice, a week apart, without undergoing phase three. Comparing these two groups helps isolate the "treatment effect" (the impact of the MdR laboratory session) from the "learning effect" which is the impact of repeating the game. Playing Game-P itself is likely to enhance the children's financial literacy by involving them in choices that reward patience.

At T = 0, the median impatience level is quite high for both genders, with a value of 5. This indicates that the median student requires at least 5 additional candies (beyond the initial 10) to agree to delay the reward for about one month. However, by T = 1, this median impatience level decreases to 4 for girls and 3 for boys. The average impatience level at T = 0 is 4.49 for girls and 5.18 for boys, but at T = 1, it drops to 4.33 for girls and 3.97 for boys. The reduction in the average impatience level is statistically significant for boys at the 10% level (Table 20; Migheli, 2017).

	Game-P in T=0		Game-P in T=1	
	Female	Males	Female	Males
Mean	4.49	5.18	4.33	3.97
Median	5	5	4	3
Standard Deviation	4.21	4.33	4.00	4.07
N	49	65	49	65
T test (*P* values) Mean1-Mean0=0	0.84	0.10		

Table 20: Impatience level of children in Game-P in T=0 and in T=1

The data collected from the games were analyzed using a difference-in-differences methodology, in order to examine the effect of the program on the levels of patience among kids who provided consistent responses. Starting with the simplest specification (see Table 21, column (i)), the impatience score was regressed on the time dummy (T), the group dummy identifying the treated

group (G), and the treatment dummy (D = T*G). The group dummy captures systematic differences between the control and treated groups. The analysis revealed a substantial initial difference between the treated and non-treated groups. Being in the treated group is associated with an impatience score that is, on average, 5.179 points lower.

	(i) Random-effect GLS regression b/se	(ii) Random-effect GLS regression b/se	(iii) Random-effect GLS regression b/se
Time (T)	− 0.500 (0.346)	− 0.444* (0.261)	
Group (G)	−5.179*** (1.285)	−6.152*** (1.517)	
Treatment effect (D=T*G)	−0.174 (0.445)	−0.356 (0.403)	
Time (T)*male			−0.364** (0.157)
Time (T)*female			−0.571 (0.549)
Group (G)*male			−6.293*** (1.347)
Group (G)*female			−5.967*** (1.797)
Treatment effect (D)*male			−0.836* (0.471)
Treatment effect (D)*female			0.371 (0.717)
Male		0.557 (0.785)	1.200** (0.506)

Father education: high school		1.138** (0.479)	1.187** (0.417)
Father education: university		1.536* (0.805)	1.532* (0.799)
Mother education: high school		0.736 (0.589)	0.687 (0.620)
Mother education: university		0.436 (0.672)	0.442 (0.706)
Older sibling (yes/no)		−0.324 (0.366)	−0.346 (0.367)
Younger siblings (yes/no)		−0.409 (0.385)	−0.424 (0.397)
Math grade		−0.294 (0.586)	−0.309 (0.590)
Weekly allowance (yes/no)		−0.165 (0.672)	−0.136 (0.699)
Savings (yes/no)		1.340** (0.553)	1.339** (0.538)
Constant	8.955*** (0.585)	9.531** (4.745)	9.297* (4.746)
Sigma u	2.925	2.685	2.700
Sigma e	2.124	2.290	2.293
Rho (fraction of variance due to u_i)	0.655	0.579	0.581
R-squared	0.260	0.330	0.335
N	222	186	186
Tests (*P* values):			
T + D = 0	0.0160	0.0092	
[T+D]*male=0			0.0069
[T+D]*female=0			0.6651

T*male=T*female			0.5960
D*male=D*female			0.1237
[T+D]*male = [T+D]*female			0.1412

Table 21: Effect of the treatment on the impatience level (dependent variable: impatience score)

Significance levels: *** p<0.01, ** p<0.05, * p<0.10

Source: (Migheli, Moscarola, 2017)

Next, additional specifications with a broader set of explanatory variables were considered (see Table 21, column (ii)). These variables included the student's gender, their parents' education levels, the presence of younger and/or older siblings, the student's math grade, whether they receive a weekly allowance, and whether they have personal savings. These socio-demographic characteristics were found to correlate with being in the treated group, and their inclusion improved the significance levels of some key regressors. Notably, the learning effect captured by the time dummy is now negative and significant at the 10% level. This suggests that repeated participation in Game-P encourages students to be more patient, with an estimated reduction in impatience of about 0.444 points. While the significance level is modest, the result is robust enough to be highlighted for two main reasons: the sample size is relatively small, making a 10% significance level noteworthy, and the program is very brief, representing a lower-bound benchmark compared to similar programs in existing literature. The group effect becomes −6.152.

In column (iii) of Table 21, the analysis focuses on gender-specific effects. By interacting the time, group, and treatment dummies with gender, it becomes apparent that for girls, the treatment and repetition effects remain non-significant. However, for boys, both effects are negative and significantly different from zero. According to estimates by Migheli and Moscarola (2017), their initiative reduces the impatience score of boys by about one point, with approximately 70% of this

effect attributable to the MdR laboratory. Specifically, the coefficients for “Time (T)*male” and “Treatment effect (D)*male” are −0.364 and −0.836, respectively.

Afterward, the organizers of the intervention examined the impact of the treatment on the consistency of the children’s choices, as presented in Table 22. The dependent variable was a dummy variable set to one if the child provided an inconsistent response. In the analysis of Game-P, multiple switches between A and B or from B to A were classified as inconsistent.

Column (i) of Table 22 shows the estimates using the time trend, the group dummy, and the interaction between time and group as regressors. These variables capture the learning effect from repeating the game, the initial differences between treated and control groups, and the treatment effect, respectively. The results indicate a significant and negative group effect (coefficient −0.695, average marginal effect −0.134) and a significant and negative treatment effect (coefficient −0.453, average marginal effect −0.0872), with no significant learning effect. However, the learning and treatment effects are jointly significant at the 10% level.

In column (ii) of Table 22, additional explanatory variables are included. The treatment effect appears stronger, showing that the probability of an inconsistent response decreases by about 13 percentage points when children participate in the MdR laboratory. However, the repetition of Game-P now seems to negatively affect the consistency of choices, suggesting a possible decline in the children’s attention or interest in the game.

When interacting the time, group, and treatment dummies with gender (Table 22, column (iii)), the analysis reveals that boys benefit more from the repetition of the game and the treatment compared to girls. The combined effects of the time and treatment dummies are statistically different between boys and girls at the 1% level. Specifically, for boys, the coefficients for the time and treatment dummies are jointly significant, with marginal effects of −0.049 and −0.195, respectively. For girls, the marginal effects are 0.151 and −0.114, but these are not statistically significant at standard levels.

	(i) Random-effect Probit		(ii) Random-effect Probit		(iii) Random-effect Probit		(iv) Fixed-effect LPM
	b/se	mfx	b/se	mfx	b/se	mfx	b/se
Time (T)	0.084 (0.140)	0.0162 (0.0272)	0.344* (0.183)	0.0673* (0.0359)			
Group (G)	−0.695*** (0.268)	−0.134*** (0.0375)	−0.519* (0.293)	−0.102* (0.0538)			
Treatment effect (D=T*G)	−0.453* (0.258)	−0.0872* (0.0464)	−0.665** (0.334)	−0.130** (0.0633)			
Time (T)*male					−0.269 (0.444)	−0.0487 (0.0786)	−0.080 (0.058)
Time (T)*female					0.837 (0.749)	0.151 (0.131)	0.150 (0.202)
Group (G)*male					−0.774*** (0.263)	−0.14*** 0.0423	
Group (G)*female					−0.437 (0.423	−0.0791 (0.0731)	

Treatment effect (D)*male					−1.079* (0.649)	−0.195* (0.114)	−0.058 (0.061)
Treatment effect (D)*female					−0.628 (0.820)	−0.114 (0.145)	−0.133
Male			−0.614*** (0.220)	−0.12*** (0.0440)	0.158 (0.123)	0.0285 (0.0227)	
Father education: high school			0.211 (0.331)	0.0412 (0.0646)	0.268 (0.308)	0.0485 (0.0546)	
Father education: university			0.394 (0.285)	0.0771 (0.0545)	0.485 (0.295)	0.0877* (0.0510)	
Mother education: high school			−0.202 (0.258)	−0.0395 (0.0497)	−0.220 (0.268)	−0.0398 (0.0469)	
Mother education: university			−0.592** (0.300)	−0.116** (0.0538)	−0.679** (0.338)	−0.123** (0.0570)	
Older sibling (yes/no)			−0.177 (0.320)	−0.0346 (0.0632)	−0.228 (0.306)	−0.0412 (0.0553)	
Younger siblings (yes/no)			−0.229 (0.190)	−0.0448 (0.0393)	−0.270 (0.227)	−0.0489 (0.0429)	
Math grade			−0.313*** (0.111)	−0.0613*** (0.0211)	−0.343*** (0.121)	−0.0620*** (0.0203)	
Weekly allowance (yes/no)			1.027*** (0.245)	0.201*** (0.0544)	1.124*** (0.247)	0.203*** (0.0517)	
Savings (yes/no)			−0.169 (0.143)	−0.0330 (0.0295)	−0.184 (0.172)	−0.0332 (0.0321)	
Constant	−0.604*** (0.133)		2.257** (1.107)		2.136* (1.105)		0.222*** (0.015)

Insig2u_cons	−0.009 (0.000)		−0.561 (0.000)		−0.240 (0.000)		
R-squared adj.							0.036
N	324		272		272		324
Test (*P* values):							
T+D=0	0.0889		0.2088				
[T+D]*male=0					0.0096		0.0001
[T+D]*female=0					0.5289		0.8042
T*male=T*female					0.3538		0.4057
D*male=D*female					0.7163		0.7868
[T+D]*male = [T+D]*female					0.0013		0.0409

Table 22: The effect of the treatment on the inconsistency of the responses

Significance levels: *** p<0.01, ** p<0.05, * p<0.10

Source: (Migheli, Moscarola, 2017)

Assessing the effectiveness of this intervention is important for several reasons. Firstly, it represents a form of financial literacy that can be easily administered by the MdR and other institutions to visiting children. Secondly, as a short extracurricular activity, it is likely to be more appealing to parents compared to longer programs. Thirdly, its structure and duration enable it to reach many beneficiaries at a low cost. Fourthly, if effective, it could stimulate further interest in financial education among children and their parents. Although a one-hour activity may have limited effects on children's financial literacy, it can reveal their sensitivity and receptiveness to this type of subject.

The observed differences in learning paths suggest that financial literacy programs might need to be gender-differentiated or restructured to be effective for both boys and girls. Further research is needed to explore this gender difference, particularly in relation to language. Although research in this area is still in its early stages, a recent experiment by Boggio and Coda Moscarola (2017) found that gender-specific language improves females' consistency in facing intertemporal problems.

However, simple interventions, such as single courses, may not be sufficient, as financial knowledge depreciates over time (Fernandes et al., 2014). Therefore, implementing finance as a compulsory course in secondary schools and offering periodic courses for adults could help maintain an adequate level of financial literacy within the population.

4. Conclusions and Future Directions

The purpose of this thesis has been to provide an exhaustive analysis of the current state of financial literacy in Italy, contextualizing it within a global context. Through examining various financial education initiatives implemented by different types of organizations, this study aimed to evaluate their effectiveness and identify their strengths and weaknesses. By utilizing the unique strengths of the government, private sector, and non-profit organizations, and through enhanced collaboration, Italy can significantly improve its financial literacy levels and empower its citizens to make better financial decisions.

The findings underscore the necessity of targeted, behaviorally informed, and continuously evaluated financial education programs. First, programs need to be customized because different demographic groups have varying financial education needs. Programs tailored to specific groups, such as students, retirees, low-income families, or small business owners, are more likely to address their unique challenges and requirements effectively. Evidence from the analysis shows that generalized approaches often fail to engage all segments of the population adequately, thus emphasizing the need for targeted interventions. Then, behaviorally informed because programs focusing solely on information dissemination do not sufficiently impact long-term financial behavior. Incorporating behavioral insights may lead to more impactful and lasting changes. Finally, continuously evaluated programs because ongoing evaluation allows for the assessment of a program's effectiveness and the identification of areas for improvement. This ensures that financial education initiatives remain relevant and effective over time. The analysis highlights the lack of sufficient long-term impact assessments in many current programs. The evaluation is essential for adapting and refining the initiatives to achieve sustained success.

Additionally, three specific case studies were analyzed to assess the impact of financial education projects.

This chapter summarizes the findings, discusses the implications of these findings, and offers recommendations for improving financial education programs in Italy.

4.1 Summary of Key Findings

In the following paragraph, an overview of the main results will be presented, providing a concise synthesis of the most significant insights from the research. This summary aims to offer a clear understanding of the key points and their implications.

4.1.1 Financial Literacy in Italy

Italy's financial literacy level remains lower than in many other developed countries, as highlighted in the introductory chapter. The global context reveals that while progress has been made, significant gaps continue to exist, particularly among younger and older populations, women, and those with lower educational backgrounds. These disparities underline the need for targeted interventions that address the specific needs of these groups.

4.1.2 Evaluation of Financial Education Initiatives

The analysis of financial education programs across Italy reveals a varied landscape of initiatives, each exhibiting unique strengths and weaknesses. These programs, implemented by the government, private sector, and non-profit organizations, play a central role in promoting financial literacy. However, the effectiveness of these initiatives varies, and understanding their strengths and weaknesses provides valuable insights for future improvements.

Government-led programs have made progress in integrating financial education into the national curriculum and raising awareness through national campaigns. The establishment of a national committee for financial education has facilitated a coordinated strategy across the country, launching numerous initiatives. For example, the financial education portal serves as a centralized resource for information, making it easier for individuals to access educational materials. Events such as Financial Education Month draw national attention to financial literacy, promoting widespread awareness.

However, these initiatives face several challenges. Bureaucratic bottlenecks often slow down the implementation process, limiting the effectiveness and proper execution of government programs. Additionally, many initiatives focus primarily on information dissemination rather than active engagement with the audience, limiting their overall impact. Furthermore, while national campaigns are effective in raising awareness, their long-term impact on financial behavior is frequently not adequately assessed.

On the other hand, private sector programs have shown promise by leveraging technology and innovative teaching methods to engage participants. These initiatives often feature interactive tools and gamification strategies to make financial education more engaging and accessible. Moreover, partnerships with public and private entities create extensive networks, maximizing the reach and impact of financial education initiatives.

Non-profit organizations play a key role in financial education by addressing specific community needs and ensuring that vulnerable groups receive the necessary education. These initiatives often emphasize empowerment and social equity, making financial education accessible to all demographics.

However, nonprofits frequently have to deal with funding and resource limitations, which can impact the scalability and sustainability of their programs. The reliance on voluntary efforts and limited resources can lead to inconsistent program quality and implementation. Addressing these challenges requires securing stable funding sources and developing strategies for scaling successful programs.

In conclusion, while each type of program has its own unique strengths, they also face specific challenges that impact their overall quality and effectiveness. A balanced approach that combines the strengths of each sector while addressing their respective weaknesses could lead to more effective and sustainable financial education programs. Enhanced coordination, innovative engagement strategies, and stable funding are extremely important for improving the quality and impact of financial education across Italy.

4.1.3 Case Studies Analysis

The primary school project *La Torta dell'Economia* demonstrates the potential of early financial education interventions. The evaluation for the 2016/2017 school year indicated positive outcomes, including increased interest in economics, improved financial literacy, and reinforced attitudes towards responsible money management. Although the effects were modest, they represent foundational steps that could lead to more significant changes over time. This case study highlights the importance of starting financial education early and suggests that even small interventions can have a meaningful impact.

Secondly, the controlled experiment *Financial Literacy by Design* underscores the complexities of financial decision-making in contemporary online contexts. Despite adequate financial literacy levels among participants, the study found that abundant information does not necessarily lead to better financial decisions. This finding aligns with Herbert A. Simon's notion that an overload of information can diminish attention and decision-making quality. The study emphasizes the need for ongoing evaluation of financial education programs, particularly through controlled experiments, to understand their true impact on behavior. It also highlights the extremely important role of behavioral insights in designing effective interventions.

Lastly, the *Gender Differences in Financial Education* initiative explores how boys and girls learn financial basics through simple programs, revealing distinct learning patterns. Repetition of the game increased patience in girls but had the opposite effect on boys. On the other hand, the treatment itself improved boys' patience while diminishing it in girls. In the case of girls, these opposing effects balanced each other, resulting in no overall change. For boys, however, the treatment effect outweighed the learning effect, leading to a significant reduction in impatience. This study emphasizes the importance of designing financial education programs that are suited to the specific learning needs and behaviors of both genders to maximize their effectiveness.

All three programs had positive outcomes in some measured areas, even if modest. It is worth highlighting, though, that each intervention is unique in its characteristics. While we know that the described initiatives had an impact in the desired direction, it is difficult to generalize and determine which one may be the most effective when applied on a large scale.

4.2 Implications and Recommendations

The analysis and findings presented in this thesis highlight several areas where improvements can be made to enhance the effectiveness and reach of financial education programs in Italy.

The following sections provide recommendations on how to improve program effectiveness and suggest policy measures that can support the development and implementation of these initiatives.

4.2.1 Enhancing Program Effectiveness

Enhancing the effectiveness of financial education programs in Italy requires the implementation of several strategic measures. Programs must be tailored to meet the needs of specific demographic groups, particularly those most at risk of financial illiteracy, such as the young, elderly, women, and individuals with lower educational backgrounds. They should be planned for the long term and include adequate training for educators. Furthermore, understanding human behavior is essential for designing impactful financial education initiatives. Integrating findings from behavioral economics and finance can help create more effective learning experiences.

Systematic monitoring of its effectiveness, impact assessments and controlled experiments should become standard practices for evaluating financial education programs. This approach will help identify what works and guide resource allocation to the most effective interventions.

Enhanced collaboration between the government, private sector, and non-profit organizations can lead to more robust financial education strategies. Each sector brings unique strengths that, when combined, can address the challenges of financial literacy.

4.2.2 Policy Recommendations

Policy recommendations to support strategies that can improve programs effectiveness include increased funding and institutional support, which are essential to ensuring the sustainability and scalability of financial education initiatives. Public-private partnerships can be valuable for securing the necessary resources.

Integrating a more robust approach to financial education into the school curriculum and increasing the time dedicated to financial education classes from an early age is extremely important. Educational materials should be age-appropriate, engaging, and relevant to students' everyday lives. National campaigns to raise awareness about the importance of financial literacy can help foster a culture of financial responsibility and lifelong learning.

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Acknowledgments

I am deeply grateful to everyone who has supported me during this challenging period of my life.

Firstly, I extend my sincere thanks to Professor Calcagno for the opportunity to dedicate several months to a topic I am passionate about and for his clear and valuable guidance.

Special appreciation goes to Gabriele for his insights on financial education interventions and his availability.

I am immensely thankful to my father for his patience in reading my drafts and tolerating my endless explanations. Thank you, Dad, for your loyal support; I will always be grateful.

A heartfelt thank you to my mother, who instilled in me the perseverance to reach this point. Without her help, I would not be here today.

Thanks to my brother for encouraging me to do my best and giving me hope for the future.

I also want to express my gratitude to Aubane, who reminded me to find light in the darkest moments.

Lastly, I dedicate a line to myself for the courage and determination shown throughout this journey.