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The gender gap in financial literacy

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## INTRODUZIONE

Negli ultimi due decenni l'ambiente economico-finanziario che ci circonda ha avuto un cambiamento pressoché radicale. Dalla semplicità degli strumenti finanziari e delle relazioni tra intermediari finanziari e investitori degli anni '80 e '90, si è passati ai complicatissimi ed intricati strumenti finanziari dei giorni d'oggi, creati da un 'ingegneria finanziaria sempre più evoluta.

Il mondo finanziario è caratterizzato sempre di più da una forte incertezza e da andamenti altalenanti, con conseguente aumento della rischiosità economica per le persone. Quest'ultime oggigiorno devono saper prendere in modo sempre più autonomo le proprie scelte finanziarie, le quali se prese in modo scorretto potrebbero compromettere il patrimonio accumulato negli anni passati.

Nell'ultima decina d'anni i temi dell'alfabetizzazione finanziaria e dell'educazione finanziaria stanno assumendo maggiormente riconoscenza a livello mondiale, soprattutto dopo lo scoppio della crisi economica del 2008, gli individui in generale devono avere una minima conoscenza e capacità di prendere decisioni finanziarie in modo consapevole ed efficace.

Diversi imponenti studi hanno rilevato importanti lacune in termini di alfabetizzazione finanziaria, soprattutto si è rilevata una sostanziale differenza di conoscenze tra uomo e donna, queste disparità di genere sono marcate maggiormente in Italia, nei paesi poveri e quelli in via di sviluppo.

Questo elaborato sperimentale è composto da due parti fondamentali, la prima ha il fine di far comprendere l'estensione del problema, sempre con uno sguardo al gender gap e con una particolare attenzione al caso Italiano, tramite la revisione di importanti articoli sul tema.

La ricerca " Le sfide dell'educazione finanziaria " ( CONSOB 2017 ) dimostra la differenza dei sistemi di codifica e decodifica delle informazioni tra i due sessi e la necessità di utilizzare metodi

di comunicazione adatti all'interlocutore, e sulla base di questo, con la seconda parte dell'elaborato si vuole comprendere il livello di alfabetizzazione finanziaria, tramite un'assegnazione di un sondaggio ad hoc su un campione di donne per comprendere qual è il loro attuale livello di financial literacy e quali eventuali canali, stili e metodi possono catturare l'attenzione per la divulgazione di informazioni mirate su questioni economico-finanziarie.

## **ABSTRACT**

Financial education and financial literacy has gained a prominent position in the global policy agenda. It is now universally recognized as a core component of the financial empowerment of individuals and the overall stability of the financial system. Without an understanding of basic financial concepts, people are not well equipped to make decisions related to financial management. People who are financially literate have the ability to make informed financial choices concerning borrowing, saving, investing and more. Those who are more financially literate are more likely to invest in the stock market and pay attention to fees, to borrow at low costs, to accumulate retirement wealth, and to diversify risk.

One impressive feature of the empirical data on financial literacy is the large and persistent gender difference, research has shown that financial illiteracy is widespread among women, and that many women are unfamiliar with even the most basic economic concepts needed to make saving and investment decisions. In this regard in the 2014 Standard & Poor's Ratings Services Global Financial Literacy Survey (S&P Global FinLit Survey), provides this information across a wide array of countries. It builds on early initiatives by the International Network on Financial Education (INFE) of the Organization for Economic Co-operation and Development (OECD), the World Bank's Financial Capability and Household Surveys, the Financial Literacy around the World (FLAT World) project, and numerous national survey initiatives that collect information on financial literacy. The survey complements these efforts by delivering the first and most comprehensive global gauge of financial literacy to date and involve more than 150,000 nationally representative and randomly selected adults in more than 140 economies were interviewed.



# **Gender gap in financial literacy**

## **CHAPTER 1**

### **Knowledge, behavior and attitude in financial literacy : women focus**

#### **1.1 Elements of financial literacy**

Financial literacy is a necessary pillar in the current global economic system, the foresight in managing funds and the general understanding of the fundamentals economics themes should be implemented in a very spontaneous way by each individual, but as numerous studies have confirmed, this is not the case at all. ( Dino Pesole, 2019. )

Financial education is an important tool for the abatement of inequalities, enabling us to raise awareness in those decisions that mark the vital changes within our society. From the appraisal of a contract of employment to the choice of a mute of a house rather than a prudent pension plan, there are several fields of interest where the financial management is immersed. The relationship between literacy and financial stability in a complex and competitive world is becoming ever closer. The transfer of economic and financial competences can no longer be left to vague believable sources, but must be the result of interconnected work by competent institutions.

By designing and developing better financial literacy policies, everyone, from new generations to older citizens, will be helped to acquire a solid financial culture, which lays the foundations for greater social and employment inclusion. ( Claudia Segre, 2018 ).

Thanks to numerous international organizations, global research has been carried out with the purpose to understand the extent of the problem and to find out a new set of solutions, for example



a great contribution is given by the Organization for Economic Co-operation and Development that is at the centre of financial literacy measurement worldwide, having developed comprehensive tools for adults and youth. In 2016, the OECD published an International Adult Survey of Financial Literacy Competencies covering 30 countries and economies (OECD, 2016a), and the second international assessment of financial literacy among 15-year-olds within the OECD Program of International Student Assessment (PISA) was published in May 2017 and even today the research is going on.

Inquire about the work of major economic research institutions is fundamental for understand better what financial literacy is and how is structured. According to the OECD, financial literacy is “a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being”. Define and measure financial literacy is essential to figure out educational impact as well as barriers to effective financial choice. Thanks to the OECD/INFE “Financial literacy measurement Toolkit”, that is a dedicated statistical instrument to quantitatively appraise financial literacy , there is an overview of the problem according to a subdivision between three major aspects that composed financial literacy which are: financial knowledge, behavior and attitude analyzed on a sample of 101.596 adults aged 18 to 79 in 21 countries.

Another aspects that deserve attention and comes to light from these studies is the gender gap in financial literacy, where it is deduce that women display lower financial literacy and confidence than men, leaving them at a potential detriment. The possible reasons associated with the gender gap are mostly about cultural differences and their impact on the specific country, the context of the provenience and the level of education.

## 1.2 Financial Knowledge

Financial knowledge is the financial awareness and understanding about the economics concepts and procedures as well as the use of this understanding to solve financial problems. It include conceptual financial knowledge , procedural financial knowledge and applied financial knowledge.

It is necessary for undertaking activities such as following news about the economy, comparing financial products and services and making right and aware financial decisions. A general knowledge of this area, accompanied by a concrete ability to application, leads the individual to make more informed choices with substantial benefits in the long run, higher levels of financial knowledge are associated with positive outcomes such as planning for retirement or a reduction in negative outcomes such as debt accumulation, and many other daily proceedings.

For measuring financial knowledge the OECD/ INFE toolkit used seven main questions with the purpose of testing :

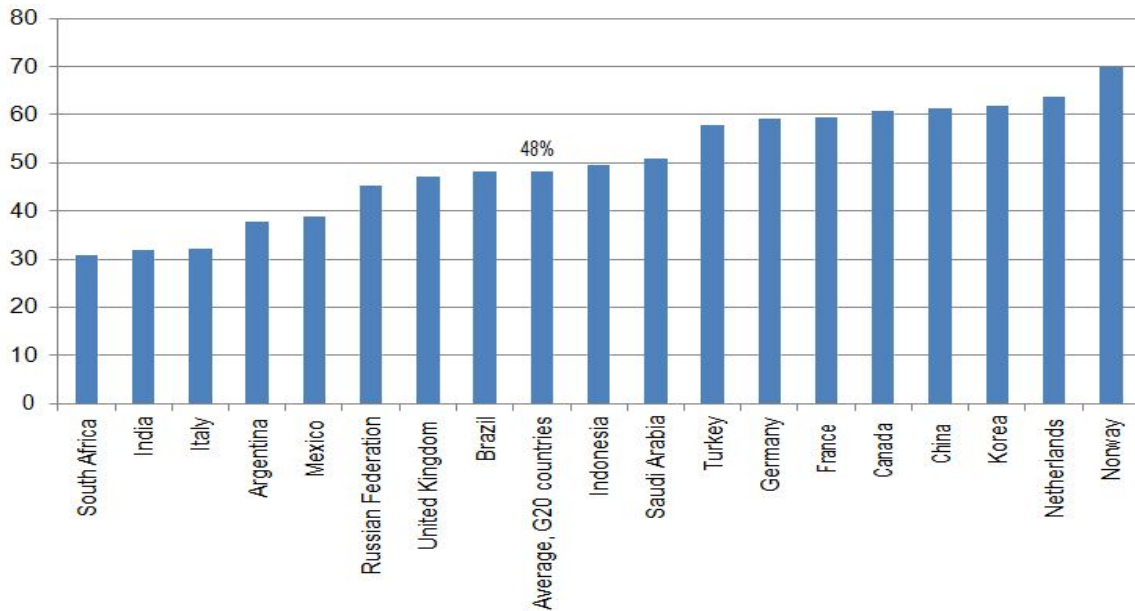
1. the ability to understand how inflation impacts on purchasing power
2. the understanding of interest without difficult arithmetic calculation
3. test the ability to calculate simple interest on savings
4. whether respondent is aware of the additional benefit of compounding
5. whether respondent understand the relationship between risk and return
6. understanding of the meaning of the term inflation
7. whether respondent is aware of the benefit of the diversification

By using multiple choice and open question on the previously developed topics, significant information appears , especially with a consistent variation from country to country across the G20. Basically , according to the results , a rampant lack of financial knowledge appeared in the countries considered.

**Figure 1.1 Minimum target score (5 or more) on financial knowledge**

Percentages (weighted data): all respondents

OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries



'Average, G20 countries' reports the mean of the country percentages for all G20 countries with comparable data (excluding the Netherlands and Norway). Each country is therefore given equal weight, irrespective of sample size or population size. G20 countries that are excluded from this chart do not have comparable data.

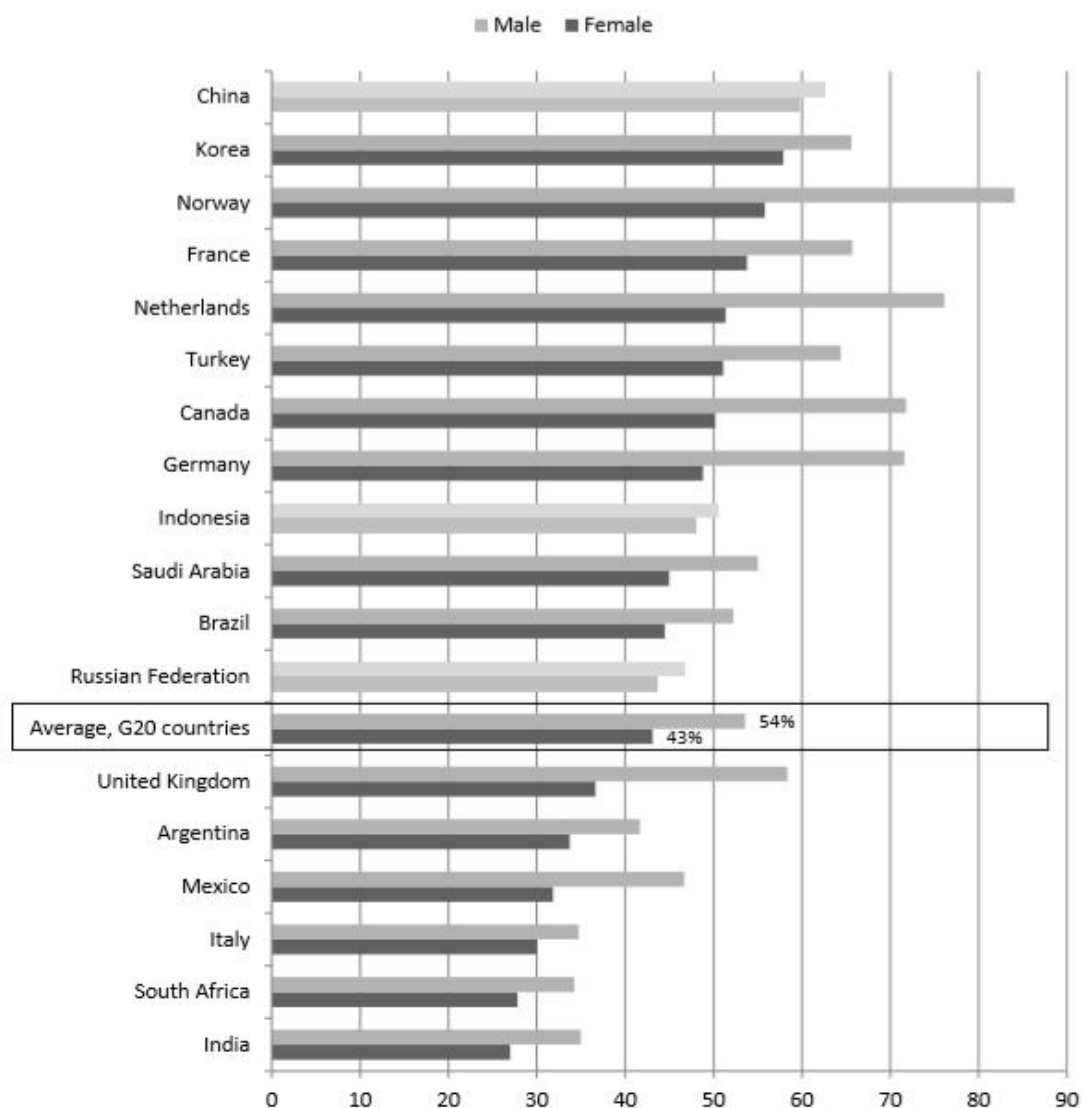
Figure 1.1 reveal the proportion of the population who achieved a minimum target score of at least five out of seven answers on the knowledge questions, this show that, on average across G20 countries, fewer than half of adults (48%) could answer 70% of the financial knowledge question correctly.

Regarding the difference between the performance of male and female, there is a remarkable gender gap in the level of financial knowledge in some countries, and across G20 countries, 11% more men than women achieved the minimum target score for financial knowledge on average in G20 countries (54% of men and 43% of women).

**Figure 1.2 Minimum target score (5 or more) on financial knowledge by gender**

Percentages (weighted data): all respondents, sorted by percentage of females achieving minimum target score.

OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries



'Average, G20 countries' reports the mean of the country percentages for all G20 countries with comparable data (excluding the Netherlands and Norway). Each country is therefore given equal weight, irrespective of sample size or population size. Gender differences significant at 0.01 are indicated by darker bars. G20 countries that are excluded from this chart do not have comparable data.

### 1.3 Financial Behavior

In broad terms, behavior is that range of actions computed by individuals in response to various stimuli coming from outside or within a given context, in the case of financial behavior these actions are driven by economic choices. The actions and behaviors of consumers are what ultimately shape their financial situation and well-being in both short and long-term. Some types of behaviors, such as choosing financial products without shopping around or using credit card to make up a shortfall in income may impact negatively on the financial situation of individuals and their financial welfare.

The OECD/INFE core questionnaire does this by incorporating a variety of questions to find out the prevalent behaviors, it draws on a number of questions to explore the extent to which people are behaving in financially literate ways, and the proportion of the population scoring at least six out of nine on this measure.

The behavioral standards include the managing of a “household budget” as a tool for money management and specifically the OECD / INFE determines how much income will be used for spending, saving or paying bills. The use of a budget to manage financial decisions was far from universal in participating countries, on average across G20 countries only three in five households were using one.

Another aspect of the financial control is the “taking responsibility for financial decisions”, almost nine in ten claimed to be at least partly responsible for making financial decisions in their household, on average across G20 countries this statement correspond to 87% of the population considered.

Moreover many people consider to be very careful before “making considered purchase” and the “timely bill payment” also appear to be the norm for people in G20 countries. However, the G20

average indicates that across these countries, one in four people were not always paying their bills on time. So it follows from this, especially for some countries like South Africa, that there are significant behavioral gaps among G20 countries.

To be born in mind there are other aspects that make up the behavioral structure of individuals among which we have control of our financial affairs and this is an aspect that certainly positively impacts in managing one's own finances day to day or spot fraudulent activity on their accounts.

Financial resilience is another important issue that is defined as the ability to withstand life events that impact one's income and/or assets. Resilience takes shapes through savings behavior, resourcefulness and adaptability, is very important that people have strategies that do not create further financial difficulties in the future.

In the end there is the last aspect of the detection of financial literacy behavior that results in a shrewd choice of financial products, through "measuring the extent to which people are shopping around for financial products", surveys on this type of behavioral approach aim at discovering how much individuals look at the alternative of available products and what information influences their purchasing decision. On average across the G20 countries, almost half of respondents, to be precisely the 49%, had made an attempt to make a financial product.

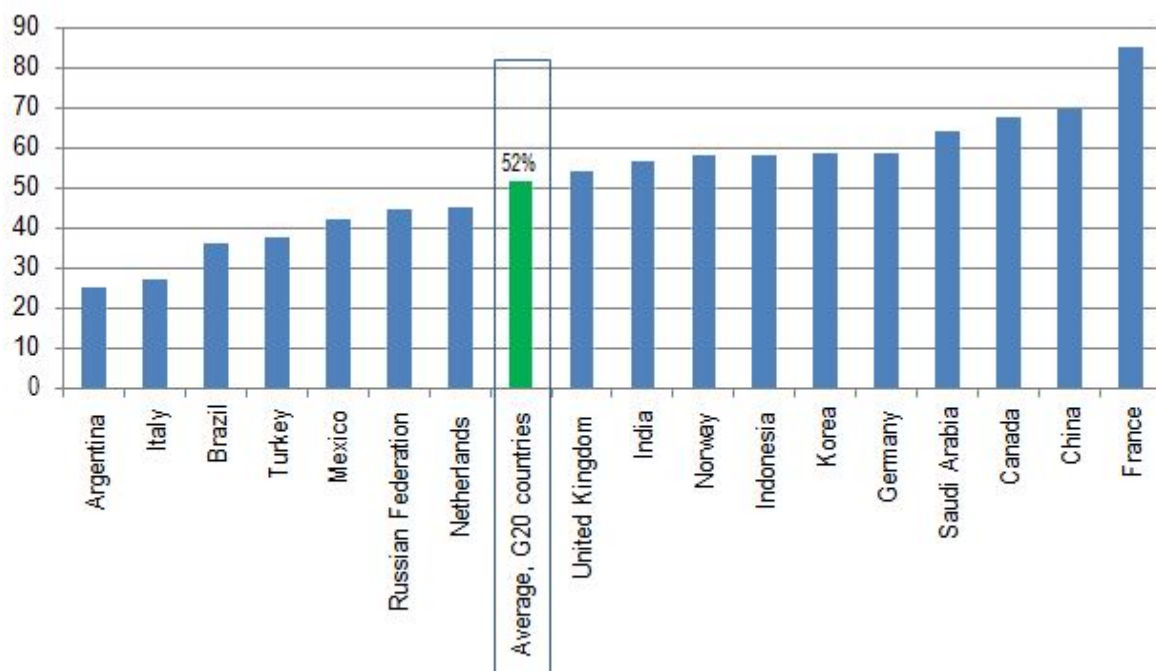
Figure 1.3 show the minimum target scores for financial behavior achieving a score of six, that reflect the portion of respondent exhibiting at least two third of the behavior of the argument discussed above. The average proportion reaching this minimum target across G20 countries is just 52%.

For what concerns gender differences in financial behavior, according to figure 1.4, across G20 countries there is a similar proportion of men and woman that achieved the minimum target score but there are exception in few country like India, Brazil, Mexico and Turkey where there is a relevant male share domination.

**Figure 1.3 Minimum target score (6 or more) on financial behaviour**

Percentages (weighted data): all respondents

OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries

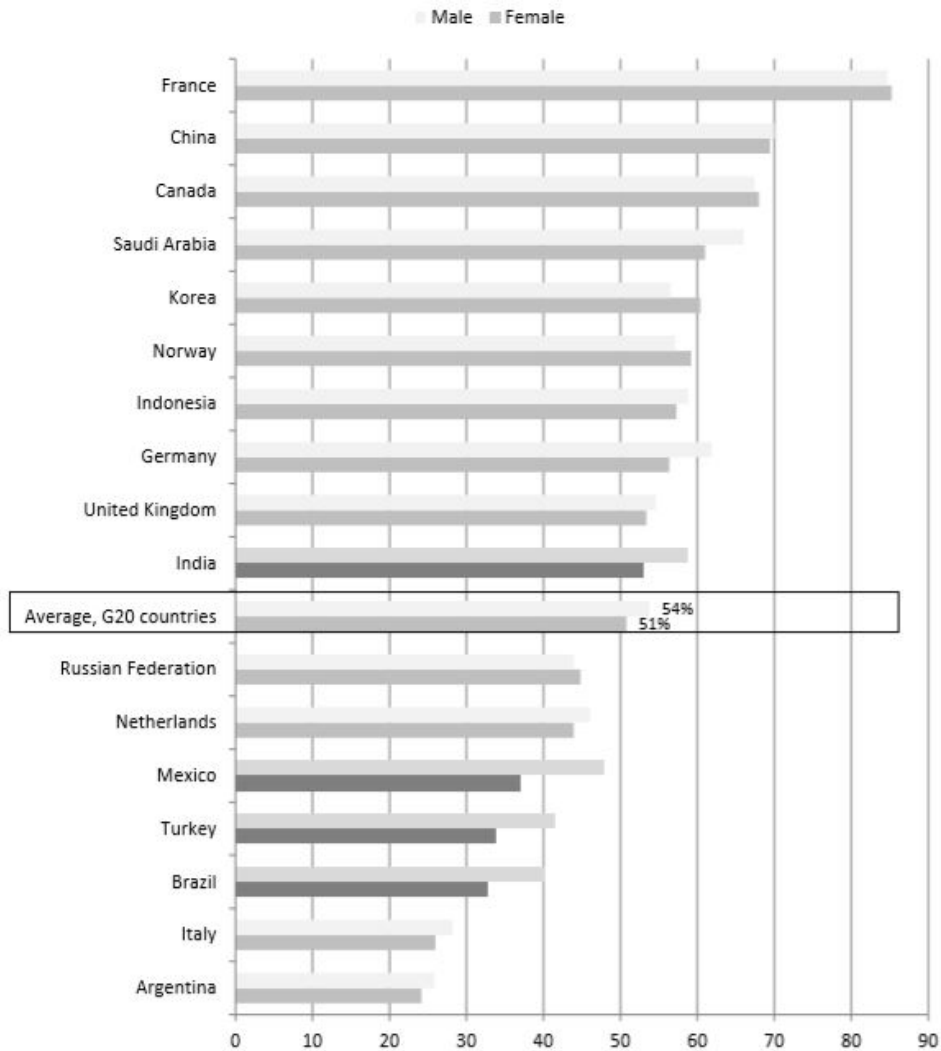


'Average, G20 countries' reports the mean of the country percentages for all G20 countries with comparable data excluding the Netherlands and Norway. Each country is therefore given equal weight, irrespective of sample size or population size. G20 countries that are excluded from this chart do not have comparable data.

**Figure 1.4 Minimum target score (6 or more) on financial behavior by gender**

Percentages (weighted data): all respondents. Differences significant at 0.01 are identified using darker bars.

OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries



'Average, G20 countries' reports the mean of the country percentages for all G20 countries with comparable data (excluding the Netherlands and Norway). Each country is therefore given equal weight, irrespective of sample size or population size. Differences significant at 0.01 in bold. G20 countries that are excluded from this chart do not have comparable data.



## 1.4 Financial Attitude

An attitude is a subjective measure of how one or more persons feel about an event, person, or object, for instance, marketers attempt to measure attitudes of consumers to determine the products they may buy or analysts that measure investor attitudes to estimate future market movements.

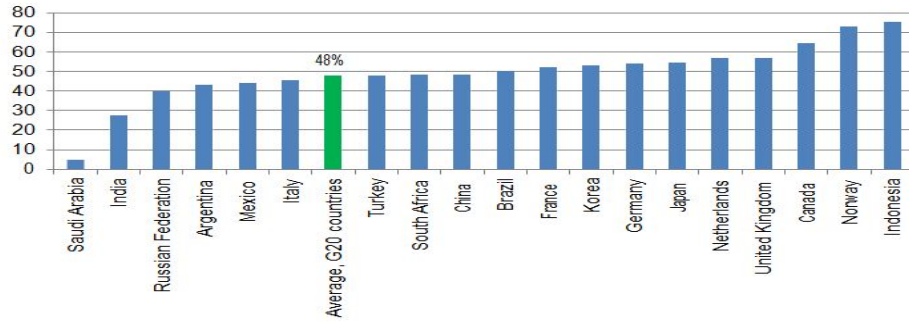
The OECD/ INFE definition of financial literacy acknowledges is that even if an individual has enough knowledge and ability to act in a particular way, their attitude will influence their decision of whether or not to act. The financial attitude measurement deal with three statement that focus on the short and long term prospective, the first is “living for today”, which corresponds to a management preference that is not strictly farsighted and embraces short-term decisions, the second is “spending”, which also includes an attitude towards the satisfaction of spending money rather than adopting a vision of future savings and the third concern “saving” which instead moves in a long-term vision, aiming at saving rather than a possible satisfaction deriving from an immediate expenditure.

According to figure 1.6 gender differences in financial attitudes are not very marked in the G20 countries, 46% for men and 50% for women, the peculiarity that emerges from this chart concerns some countries, such as Norway, where it is clear that men have less positive attitude towards the long term period than women, who in turn have shown a more far-sighted preference.

**Figure 1.5 Minimum target score (more than 3) on financial attitudes**

Percentages (weighted data): all respondents

OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries

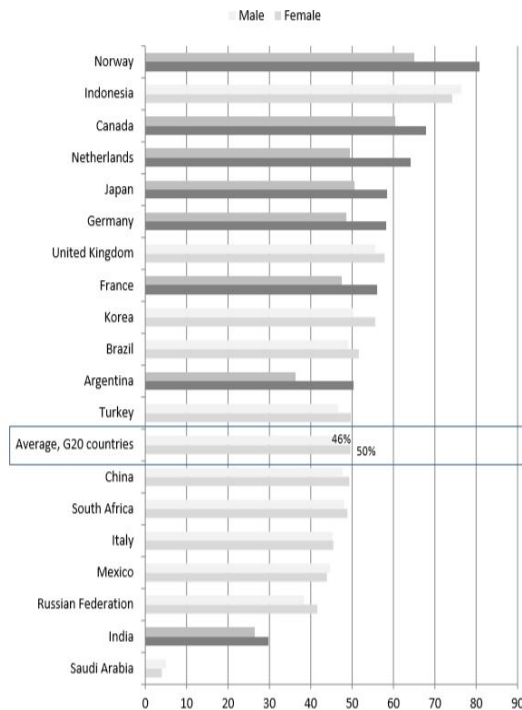


'Average, G20 countries' reports the mean of the country percentages for all G20 countries with comparable data (excluding the Netherlands and Norway). Each country is therefore given equal weight, irrespective of sample size or population size. The score for Japan is based on the average of 2 questions: *I tend to live for today and let tomorrow take care of itself* and *I find it more satisfying to spend money than to save it for the long term*. G20 countries that are excluded

**Figure 1.6 Minimum target score (more than 3) on financial attitudes by gender**

Percentages (weighted data): all respondents. Differences significant at 0.01 are identified using darker bars.

OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries



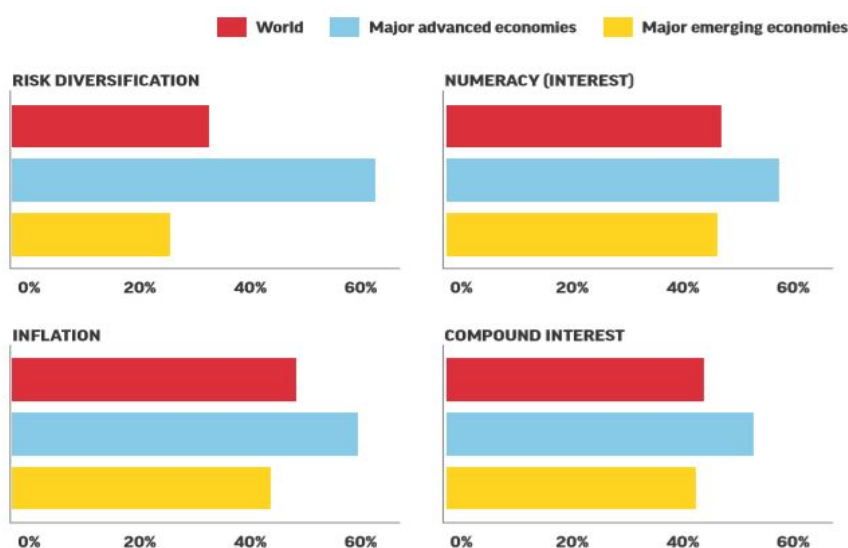
'Average, G20 countries' reports the mean of the country percentages for all G20 countries with comparable data (excluding the Netherlands and Norway). Each country is therefore given equal weight, irrespective of sample size or population size. Differences significant at 0.01 are identified in bold. The score for Japan is based on the average of 2 questions: *I tend to live for today and let tomorrow take care of itself* and *I find it more satisfying to spend money than to save it for the long term*. G20 countries that are excluded from this chart do not have comparable data.

## 1.5 Focus on financial knowledge : advanced and emerging economies

The gap between men and women, for what concerns the knowledge of financial issues, is the most relevant in terms of percentage than the other two factors analyzed above (behavior and attitude). We recall that the main topics for the evaluation of financial knowledge concern questions such as: risk diversification, inflation, numeracy (interest) and compound interest. Before the gender gap analysis we should notice a world knowledge gap between advanced and emerging economies. Among the four topics that define financial literacy, inflation and numeracy (in the context of interest rate calculations) are the most understood. Worldwide, half the adult population understands these concepts. Knowledge of risk diversification is the lowest, with only 35 % of adults correctly answering that survey question. Risk diversification also figures into some of the largest disparities among countries. In the major advanced economies, 64 % of respondents have an understanding of this concept, against 28 % in the major emerging economies . Differences for the other concepts are less pronounced, ranging from 15 % points for inflation to 10 % points for the compound interest concept.

**Figure 1.8 Stronger grasp of financial concepts in advanced economies**

(% OF ADULTS WITH CORRECT ANSWERS) Source: S&P Global FinLit Survey (2014).

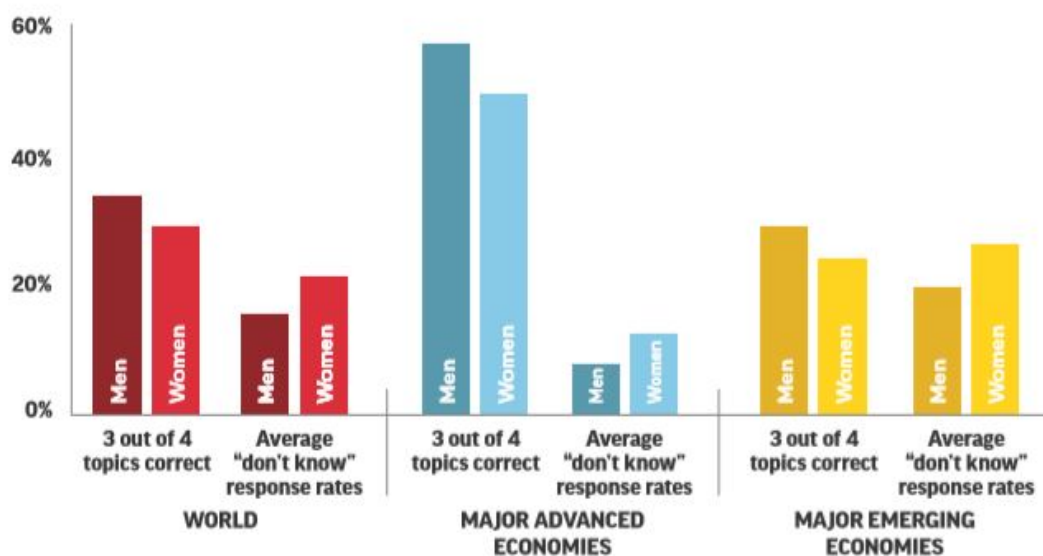


This gender gap is found in both advanced economies and emerging economies (Figure 1.9). Women have weaker financial skills than men even considering variations in age, country, education, and income. The average gender gap in financial literacy in emerging economies is 5 percentage points, not different from the worldwide gap, though it is absent in China and South Africa (where financial literacy is equally low for women and men).

There is also a gap in financial literacy when looking at relative income in the BRIC<sup>1</sup> economies. Thirty-one percent of the rich in these economies are financially literate, compared to only 23 % of the poor. ( Leora Klapper, Annamaria Lusardi, Peter van Oudheusden , 2014. )

**Figure 1.9 Women trail men in financial literacy**

(% OF ADULTS WITH CORRECT OR “DON’T KNOW” ANSWERS) Source: S&P Global FinLit Survey (2014).



<sup>1</sup> BRIC is an acronym used to represent four countries that have similar economic development. These countries are also known as the BRICs or the Big Four. This term is used to describe the four nations of Brazil, Russia, India, and China (*“World Population Review”, 2019*)

## 1.6 Overview

Financially literacy is a complex phenomenon full of variables to consider, the subdivision of this argument into three macro areas helps us to understand the current dimensions of the problem. The above arguments were based mainly on an analysis of the average of the G20 countries but there are clear differences in performance and trends between countries, resulting from multiple factors that have a thousand facet. The resulting score is therefore driven primarily by financial behavior, which contributes up to nine of the twenty-one possible points, this reflects the general understanding that financial well-being results primarily from positive behaviors and that financial education therefore needs to ultimately change behavior to improve financial well-being.

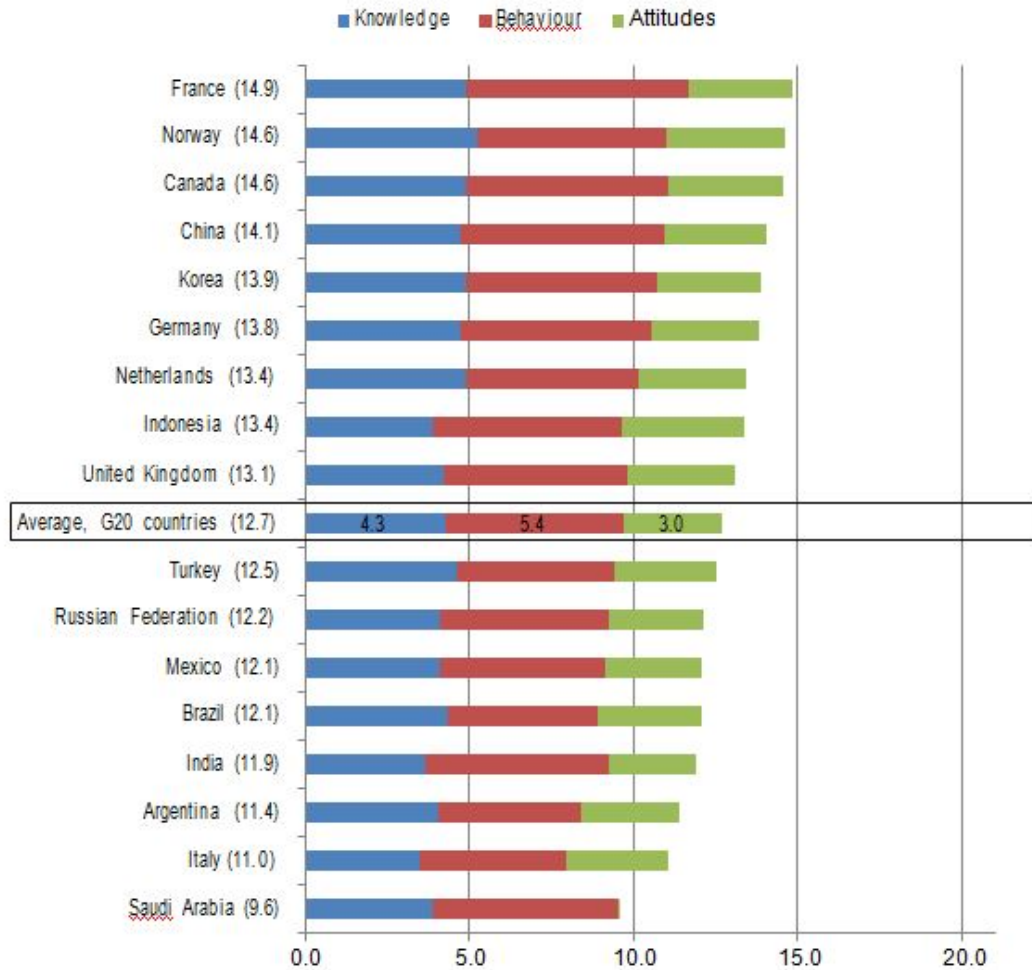
With regard to the gender gap, compared to the attitude and behavior areas, in finance knowledge there are the most significant dissimilarity, where 11% of differences in the minimum target score are remembered, with the intention to explain this gap the chapter two will be based on a research of the Standard and Poor rating agency, where the motivations and the data of the above mentioned differential are deduced.

As we can see from figure 1.7, on average in G20 countries, people score just twelve out of possible twenty one points for financial literacy, a situation that does not go unnoticed and that makes to reflect.

**Figure 1.7 Financial knowledge, attitudes and behavior**

Stacked points (weighted data): all respondents, sorted by overall score out of 21 (reported in parenthesis)

OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries



'Average, G20 countries' reports the mean of the country percentages for all G20 countries with comparable data (excluding the Netherlands and Norway). Each country is therefore given equal weight, irrespective of sample size or population size. Overall scores presented in parenthesis. These may not exactly reflect the sum of the three components due to rounding. G20 countries that are excluded from this chart do not have comparable data.



## CHAPTER 2

### Italian case : wealth gender gap and education strategy

#### 2.1 Italian case and financial education

The overall level of financial literacy in Italy is one of the lowest among G20 countries. Italians struggle in particular with the knowledge of basic economic concepts and they are less likely to put good behaviors into practice, such as drawing up a household budget. They are, however, close to the G20 average in terms of attitudes toward the long run. Financial literacy is particularly low among the least educated, the elderly, and women (for the latter in particular as regards basic knowledge).

Socio-demographic characteristics of the Italian population, such as the low level of education, only explain part of the gap with other G20 countries. However, Italian respondents seem to be aware of such weaknesses. The National Strategy for Financial Education<sup>2</sup> may build its action for increasing financial literacy upon this general awareness.

Taking into consideration the aspect of education and financial literacy, we must first of all circumscribe the field of study by providing an explanation of the two tasks which, although used by many as described, instead outline two different objectives. An authoritative source from which we can first derive a definition of literacy is undoubtedly the PACFL<sup>3</sup>. The council implements, correctly, a distinction between the concept of financial education and financial literacy. With the first, financial education, we mean the process by which consumers and investors improve their

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<sup>2</sup> The OECD and its International Network on Financial Education (INFE) conducts research and develops tools to support policy makers and public authorities to design and implement national strategies for financial education.

<sup>3</sup> The Presidents Advisory Council on Financial Literacy (PACFL, 2008), convened to “improve financial literacy among all Americans,” defines financial literacy and financial education



knowledge of products and financial concepts, such as risk, and thanks to the information, instructions and advice they get they are able to improve and improve their financial skills.

Instead, financial literacy is the result of this process. It outlines the ability to use the knowledge and skills acquired during the financial education process to manage financial resources. The second therefore depends directly on the first and it is precisely on the promotion and dissemination of financial education that investments have been made by various organizations and governments.

The following reflections can be made from the analysis of the two definitions. In the first place, financial literacy must be seen as an ever-changing feature throughout the life of the individual. In the current economic context, in which the creation of new financial products and services is on the agenda, only the continuous study of the same can allow the correct and prudent management of financial assets. Secondly, literacy must be conceived in two respects. On the one hand there is the knowledge that comes from the pure study of the subject, the knowledge then of basic concepts and financial products such as the concept of risk or the functioning of insurance and pension policies. On the other hand the knowledge that comes from the motivation, the personal attitudes and skills of the various subjects

In conclusion, the knowledge of basic mathematical concepts, the ability to calculate using the percentages, the ability to convert one currency into another up to the elementary ability to read and understand texts, articles and contracts can summarize the indispensable skills that a subject must have to be considered financially literate. Alongside these skills, which can be acquired with an effective financial education, there are others that are, so to speak, innate: motivation and confidence. The desire to seek information and advice, the confidence in putting them into practice and the ability to control the emotional and psychological reactions that often lead subjects in the non-optimal direction when faced with financial choices are also considered fundamental attributes that outline financial literacy.

With this regard, it is important to understand how to reach the right level of financial consciousness and what is the role of financial education. When you look at the potential it is clear that there are tangible benefits and financial education is about helping people make well-informed choices, about encouraging financially responsible behavior. There is plenty of evidence that proves that people who are financially literate are more likely to succeed in life. Financial education is a central theme in the current complex financial market. It is presumed that financial education initiatives will increase consumer knowledge and confidence in cross border transactions, thus supporting the completion of the EU Single Market. Improving consumers' understanding of matters such as product characteristics, terms and risks remains a contributing factor in increasing consumer confidence in financial markets.

In the financial reform agenda after the crisis<sup>4</sup>, the European Commission has taken measures to regulate the market for basic financial products that aim to improve transparency and supervision. The Markets in Financial Instruments Directive, MiFID II<sup>5</sup> prescribes for all channels which information needs to be provided for investment services. The Consumer Credit and Mortgage Credit Directives and the Packaged Retail Investment Products, PRIIPS<sup>6</sup> directive contribute to better consumer protection. In all these regulatory measures, financial education plays an important role, because financial capability is an essential factor in restoring and maintaining the trust in the European financial system and in responsible use of financial products and services. (Nijmegen University, 2009. )

The term "financial skills" does not refer exclusively to the set of knowledge in the economic-financial field which citizens are equipped with, but also includes their behavior and the long-term orientation of their choices. Examples of virtuous behavior are a careful control of family expenses, a limited recourse to debt and the use of supplementary pension funds.

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<sup>4</sup> The financial crisis of 2007–2008

<sup>5</sup> The Markets in Financial Instruments Directive (MiFID) II is a legislative framework instituted by the European Union (EU) to regulate financial markets in the bloc and improve protections for investors.

<sup>6</sup> "Packaged Retail Investment. Products"

The debate on the efficiency of financial education is continuous and the conclusions are not always univocal, apparently it seems that it is easier to convey some notions, while it is more difficult to influence changes such as the propensity to save or the attention to supplementary pensions.

Strong discrimination is the type of financial education program:, a good program should be targeted and with a specific segmentation of users, to be planned in the long run, to monitor its actual impact.

The expansion of the reference target of the initiatives requires the collaboration and coordination of all the active actors in the provision of training contents. As for children, for example, the permanent involvement of the school system would be important. For adults, cultural and social intermediaries (such as Foundations and Universities) should be involved, while the media would be the preferred channel for the general public.

With a view to enhancing the effectiveness of training initiatives, the involvement of all stakeholders potentially able to reach those who need to raise their financial skills is essential. With particular reference to young people, the school system naturally has a leading role, although there are many constraints that can hinder its involvement.

As recalled by the OECD (2012),«including financial education in the official school curriculum is considered one of the most efficient ways to reach a whole generation on a broad scale. (...) Yet the successful integration of financial education in school curricula proves to be challenging in many respects owing to a vast range of constraints.

These include: lack of resources and time; already packed curricula; insufficient expertise and know how; lack of quality materials; the variety of stakeholders involved; and the lack of strong and sustainable political willingness, commitment and overall accountability»<sup>7</sup>

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<sup>7</sup>Organization for economic cooperation and development, 2012.

## **2.2 Italian gender gap in wealth and financial literacy**

The distribution of wealth is a topic of great importance. The amount of wealth possessed constitutes, along with income and consumption, a key indicator for assessing an individual's welfare levels. The last Bank of Italy report <sup>8</sup> on the wealth of Italians and the disparity between men and women shows us the analysis of the distribution of wealth in Italy conducted at the family level, assuming an equitable distribution of the resources held among its members.

The issue of intra-family distribution of wealth is of primary importance in developing countries, where the disadvantageous factors for women of cultural and social origin are combined with less egalitarian regulations than those in developed countries, particularly as regards inheritance, separations and divorces, access to education and professions.

In Italy, as far as gender inequalities in wealth are concerned, we have substantial differences, which move mainly between real estate wealth, financial wealth and the role of inheritance. The results show significant differences, with men who in the most recent period have an average net wealth of about 25% greater than that of women.

The gap is greater for financial assets (35%), compared to real assets and in particular real estate (15%). Between the spouses / partners of the couples the gaps are even greater, around 50% for net wealth and 43% for real estate.

The differences observed on wealth can be attributed to structural differences between genders, in terms of age, educational qualifications, employment and income. The results seem to indicate that these factors are able to account, at least in large part, for the differences observed in terms of

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<sup>8</sup> The series Occasional Papers of Banca d'Italia presents studies and documents on issues pertaining to the institutional tasks of the Bank of Italy and the Eurosystem., 2018.

wealth. In terms of policy, this implies that the reduction of gaps mainly in the area of employment, income and education should lead to a downsizing and perhaps even the elimination of wealth gaps.

Also on the inheritances that the subjects interviewed received during their life there are signs of a prevalence of transfers in favor of men compared to women. ( Giovanni d'Alessio, March 2018 )

In light of what has been analyzed, one can understand how important it is to reduce the barriers of financial illiteracy, which certainly has to do with wealth and can fill the obvious gaps even on this front, currently the situation of financial literacy in Italy is discouraging .

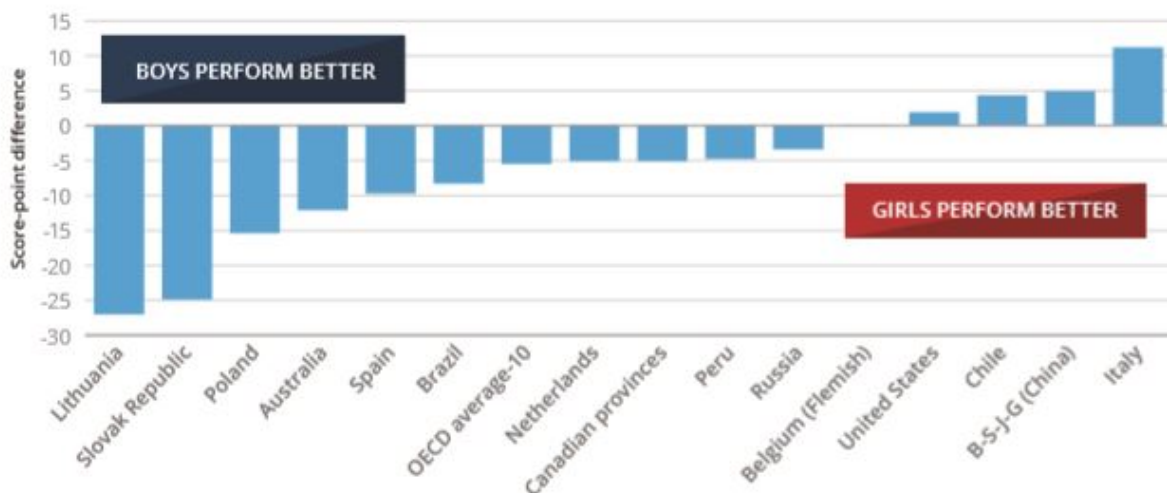
Of major advanced economies, Italy has the lowest percentage of financially literate people. Only 37% of Italians are able to correctly answer at least three out of four basic financial concepts. Further, among the G20, Italy has the largest gender gap in financial literacy, at 15%; 45% of Italian men are financially literate, whereas only 30% of women are.

This gap is comparably high for Australia (15%) and Canada (17%), but in contrast to Italy, in those countries around 75% of men can correctly answer at least three out of the four concepts compared to around 58% of women. Italy's gender gap in relation to the country's financial literacy rate is comparable to countries such as Indonesia and Brazil. Italian women tend to engage less with financial services and institutions than men compared to women in the other major advanced economies (Canada, France, Germany, Japan, the United Kingdom, and the United States). For example, 83% of Italian women have their own or a joint account at a bank, or another type of formal financial institution, whereas the percentage among men stands at 92%. Among the other major advanced economies, 95% to 99% of the population holds an account, on average, and the percentage is similar for men and women. Furthermore, on average, fewer Italian women tend to save for either retirement or unexpected financial hardship than men. This, in combination with low financial literacy, shows the potential vulnerability of women in Italy.

Moreover, the OECD’s 2012 and 2015 Programme for International Student Assessment (PISA) financial literacy data confirms the low levels of financial literacy in Italy. Further, Italy is the only country which exhibits a difference in financial literacy between boys and girls (Figure 19). Thus, the gender gap in Italy also exists among the very young (15-year-olds). The study by Bottazzi and Lusardi (2016) uses the PISA data to analyze factors that affect boys’ and girls’ financial literacy in Italy. The paper documents the impact of the family, in particular the mother, on the financial knowledge of girls. Thus, given the low levels of financial literacy among Italian adults, with no interventions, gender differences in financial literacy may persist for a long time.

**Figure 2.1 Pisa target score financial literacy among 15 years old**

Source: OECD 2015 PISA Financial Literacy Assessment data.



To build financial knowledge in the population at large and among women, specifically, will require financial education. Financial education in schools can advance financial capability among the young. Making personal finance a required course at colleges and universities would equip the young with the necessary skills and knowledge to thrive in today’s financial environment.

Recent research conducted by Kaiser and Menkoff (2016) shows that financial education has a significant positive impact on financial literacy and financial behavior.

Another possible channel for increasing financial literacy is employer-provided financial education. A study by Lusardi (2004) discusses the impact of interactive seminar-based formats and provides evidence that retirement seminars can foster wealth accumulation and bolster financial security in retirement. Research by Loibl and Hira (2006) shows that employer-provided self-directed learning sources can provide an alternative way for employees to stay current in an environment of constantly changing financial information.

In view of the different financial challenges women need to address, an effective way forward for financial education programs is to target women and men separately and to offer programs that recognize the differences between women and men in terms of financial knowledge, financial behavior, and financial needs. . ( *Global Financial Literacy Center*)

### **2.3 Italian strategies for financial education**

Italy is significantly below the average of developed countries both in terms of knowledge and behavior. The only aspect for which we are more virtuous is the low recourse to debt. The total indicator of financial competence places us in the penultimate place among the G20 countries.

Making progress on the front of financial education is therefore a necessity for our country. The urgency is increased by the fact that people are called to make increasingly complex choices, such as that of a private pension fund or the subscription of sophisticated financial products. In the Monetary Observatory of the Catholic University an attempt was made to take stock of financial education initiatives recently taken in Italy (Om 2/2019).

The data in this report shows that financial education initiatives have so far been concentrated in the north of the country, where the level of financial literacy is already relatively higher. As for the recipients, high schools receive more attention than professional schools. Less than 5% of the initiatives, recorded in 2018, provide for a personal impact assessment. A report edited two years ago by the authorities of the sector photographed a strong fragmentation of the initiatives present in Italy: in the 2012-2014 three-year period, 206 were detected, promoted by 256 different subjects. These were often initiatives aimed at a few subjects, or which were limited to distributing information material. These results make clear the need for a national strategy on financial education. The intention is to increase the financial skills of the entire population, through large-scale initiatives.

First step has already been taken, such as the creation of the national financial, insurance and pension education portal ([quellocheconte.gov.it](http://quellocheconte.gov.it)) . As for the events in physical places, there are also some news, for example the Month of financial education, which was held for the first time in October 2018 and saw 350 events in 120 cities, will be held each year. There are also numerous collaborations with newspapers and television radios.

From the agreement between the Ministry of Education and some private individuals, the Economics and Finance Olympics were born, involving 7,600 students from nearly 300 high schools. In 2020 the first national awareness and information campaign will be launched, which will make use of advertising tools, mass media and social media.

Further interesting experiences are those undertaken by various banking groups such as Intesa San paolo which, in collaboration with the Permanent Youth-Publishers Observatory, has created the program "Financial culture at school: preparing to choose" for high schools, which seeks to help students become more prepared in the economic-financial field: \* ([www.osservatorionline.it](http://www.osservatorionline.it)).



Furthermore, collaborations between insurance companies and consumer associations were born, the cooperation between these institutions has given rise, through the ANIA-Consumers Forum, to the Io & irischi project with the aim of increasing the skills of high school students in insurance and social security ([www .I & irischi.it](http://www.Io&irischi.it)).

For the three-year period 2019-2021, the strategic plan of Consob provides targeted initiatives for each category of subjects:

- For young people, an educational project for upper secondary schools;
- For adults, theater and film events;
- For small and medium-sized enterprises, training seminars on financing routes alternative to the traditional banking channel.

The need to use specific financial education tools for each age group also emerges from the Savings Museum .

For adults, the most successful initiatives are those carried out in the workplace and aimed at specific topics: for example, pension plans and forms of indebtedness. For young people it is important to develop innovative tools, such as video games and real games.

The following table shows the financial education initiatives by region in percentage terms drawn up by the monetary observatory of the Catholic university.( Angelo Baglioni, 2019. )

**TAB 1. Iniziative di educazione finanziaria regionale**

<b>Region Program</b>	<b>ONEEF 2018. Values %</b>
Abruzzo	0,7
Basilicata	0,3
Calabria	0,3
Campania	3,7
Emilia Romagna	2,7
Friuli Venezia Giulia	3,0
Lazio	4,4
Lombardia	10,8
Marche	2,0
Molise	0,7
Piemonte	4,7
Puglia	0,7
San Marino	0,3
Sardegna	0,7
Sicilia	1,3
Toscana	4,4
Trentino	2,7
Umbria	2,7
Veneto	4,0
Nazionale	19,5
Online	21,5
ND-Missing	8,7
Totale V. %	100
<i>Totale V.A.</i>	<i>297</i>

As can be seen from Table 1, the initiatives are concentrated more in the north (Lombardy and Piedmont) where, paradoxically, the level of financial literacy is higher, compared to those in the South, even if the share of initiatives available online is not negligible (21.5%) and which are described as usable throughout the national territory. This type of distribution risks becoming a factor of further strengthening, instead of a reduction, of the inequalities already found in the

financial competences of the adult population (Consorzio Pattichiari 2014) and youth (PISA 2018) of the southern area.

All the aforementioned initiatives, however, are individual, broken up between them, sometimes not very innovative as regards the methods used, giving little importance to the behavior of the subjects (they are concentrated in giving many notions and information without having an active interaction with the public) , and finally set up an insufficient system for monitoring the results.

The admirable willingness of all these stakeholders to initiate financial education initiatives in the country and thus to increase the level of financial literacy, can have an ineffective result with consequent waste of resources, because a central system that coordinates everything is lacking .

As previously stated, the hope is that a national body will be created or established to manage all the bodies involved in financial education (thus avoiding all duplication of projects and waste of economic resources), which sets a national strategy to develop and implement initiatives in a manner consistent with the various reference targets (also taking into consideration the attitudes and behavior of people), and finally that promotes the mandatory introduction of financial education in schools. (Angelo Baglioni , Paola Bongini, Doriana Cucinelli, Giuseppe D'Agostino, Patrizia De Socio, Alvaro Fuk, Annamaria Lusardi, Pasquale Munafò, Giovanna Paladino, Emanuela Rinaldi.Giugno 2019 )

## **2.4 Italian overconfidence in self-assessment financial knowledge**

Overconfidence can be defined as the unmotivated confidence in one's own knowledge and abilities. This attitude is fuelled by the apparent ease with which a forecast can be made on the basis of memories , commonplaces (representativeness) and external reference points (anchoring). Overconfidence can determine an overestimation of the variability of a phenomenon (the so-called

miscalibration effect), foster the better than average effect and cause the so-called illusion of control, that is the tendency to over-emphasize the role of personal skills

Overconfidence can significantly affect financial decisions. Along with optimism, it may raise risk taking because of upward biased forecasts (Nosic and Weber, 2010). It may nurture the presumption of beating the market or being more informed than others, leading to excessive trading and possibly worse than average market performances (Alemanni and Franzosi, 2006; Glaser et al. 2007; Guiso and Jappelli, 2006; Haigh and List, 2005; Heat and Tversky, 1991; Odean, 1998b). Finally, overconfidence may also discourage advice seeking.

Some studies shown that men spend greater resources in financial analysis, are less reliant on the opinions of their brokers, trade more and formulate more optimistic forecasts compared to women. Santos et al. (2010), employing an experimental approach, find that men show a larger degree of overconfidence, with both age and experience having some influence. As for the relation between knowledge and overconfidence, Hung and Yoong (2010) and Kramer (2014) find that higher levels of knowledge may raise overconfidence.

The interaction between knowledge and self-assessment could also go the opposite way: Anderson et al. (2015) point to low literate individuals assessing themselves more financially educated than they actually are (and to women being less knowledgeable but less inclined to misperception errors compared to men) and Tekçe et al. (2016) find that residents in more financial literate regions are less overconfident than residents in low literate areas (and that female, older and wealthier investors are less overconfident than the others are). ( M. Gentile, N. Linciano, P. Soccorso, March 2016 )

Exploring the IACOFI survey<sup>9</sup>, we found that Italians are particularly cautious in the self-assessment of their own level of financial literacy: more than 50 % of them believe that it is below

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<sup>9</sup> L'indagine sull'Alfabetizzazione e le Competenze Finanziarie degli Italiani

average, compared with about 20 % in the OECD\* countries average. Anyway, 22 % of Italians are overconfident. Men, the self- employed, those resident in Southern Italy and those with a medium-high level of education are at higher risk of overestimating their level of financial knowledge.

According to the same definition, the share of overconfident subjects is much higher in other countries, such as UK , Germany and Netherlands, where it is close to or above 40 % . However is important to keep in mind that being overconfident might be more of a problem in countries where the average level of knowledge is really low. In fact, what matters is not whether people are able to assess their level of knowledge correctly, but whether a wrong self-assessment increases the probability of making wrong financial decisions. This seems the case in Italy, where overconfident individuals face a higher risk of making bad investments, being victims of phishing<sup>10</sup> or of unauthorized use of their payment cards.

The share of under confident consumers, those who underestimate their actual financial literacy, is in Italy close to 25 %, whereas in the average OECD comparison countries it is below the 10 %. Underconfidence can be a problem as well as overconfidence, since consumers with low self-assessment are more likely to not participate in the financial markets, which means they are less likely to hold investment products, to use debt instrument or to have private pension plans.( Riccardo Viale, Shabnam Mousavi , Barbara Alemanni and Umberto Filotto ,2018 )

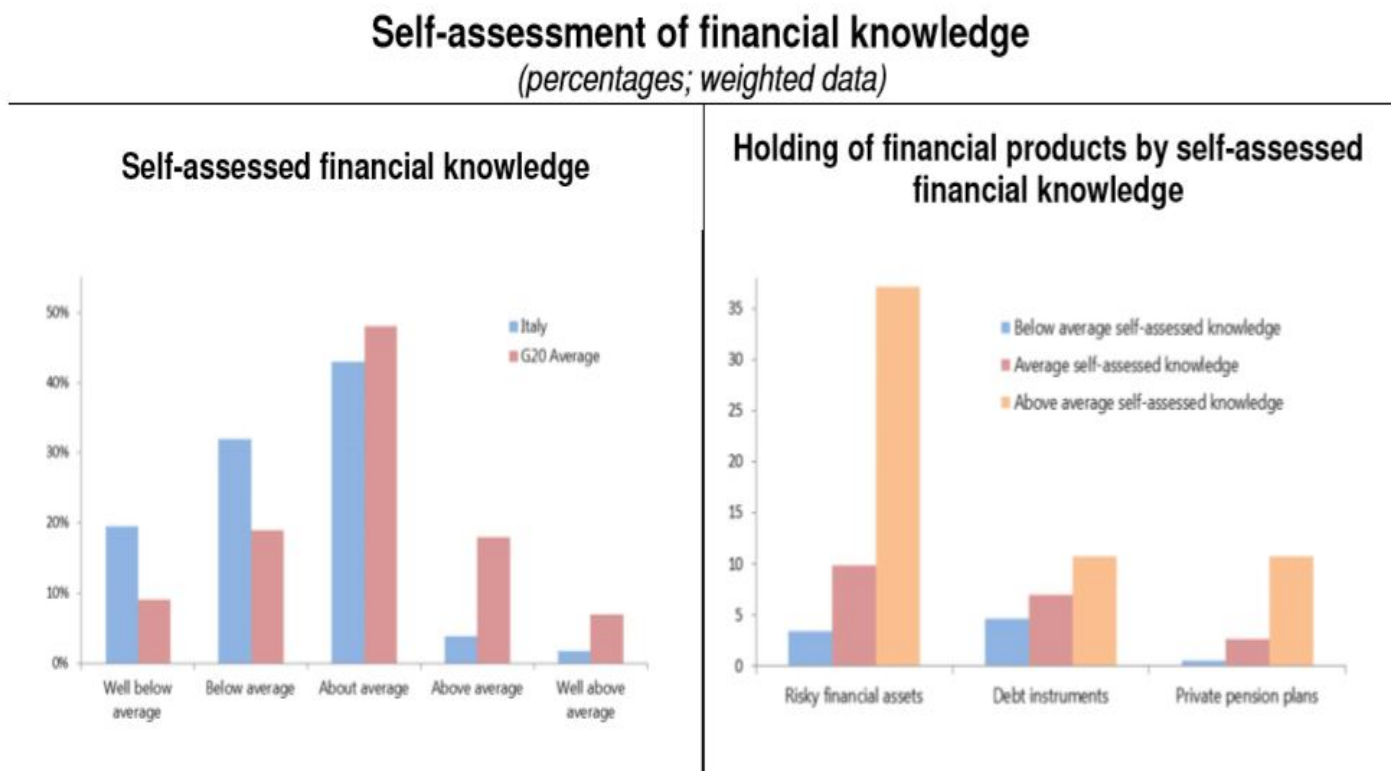
In the literature on consumer protection, as well as in the practice of policy making, there is growing interest in the cognitive and behavioral biases affecting consumers' decisions (Lefevre and Chapman, 2017). The level of self-confidence in financial matters may shape financial behavior and how confidently people answer knowledge questions or avoid them by choosing the 'don't know' option in the financial literacy survey . In the survey there is a direct question to assess the respondent's level of self-confidence. The question reads as follows: 'How would you rate your

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<sup>10</sup> Phishing is the fraudulent attempt to obtain sensitive information such as usernames, passwords and credit card details by disguising oneself as a trustworthy entity in an electronic communication.

level of financial knowledge on a scale of 1 to 5 compared with other adults in your country?’ (1 = well below average, 5 = well above average)\*. The answers to this question reveal that respondents in Italy are aware of their knowledge gaps. More than half of them believe that their financial literacy is below average, compared to about 30 % in the G20 average . Only 5 % of Italians rate their own knowledge above average, compared to 25 % in G20 countries, while the remaining 43 % rate themselves as average. (Antonietta di Salvatore, Francesco Franceschi, Andrea Neri and Francesca Zanichelli, June 2018. )

**Figure 2.2 Self-assessment of financial knowledge (percentages; weighted data)**

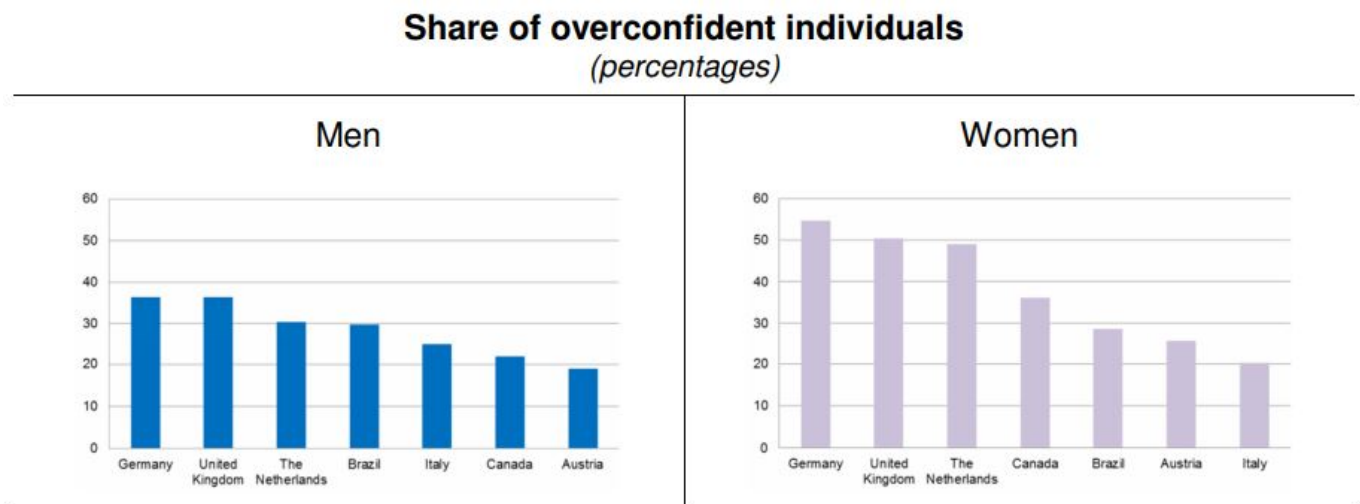


Note: Estimates refer to the adult population (18-79 years old).

Source: our calculations based on the Italian Literacy and Financial Competence Survey (IACOPI) and OECD (2017), G20/OECD INFE report on adult financial literacy in G20 countries.

As we can see from the previous graphs, in Italy about 22 per cent of the population is overconfident. Together with Austria, Italy displays the lowest incidence of overconfident individuals, whereas Germany and the UK show the highest level.

**Figure 2.3 Share of overconfident among countries**



Note: Estimates refer to the adult population (18-79 years old).

Source: our calculations based on the Italian Literacy and Financial Competence Survey (IACOFI) and other countries' surveys based on the OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion (2015).

The probability of being overconfident in Italy, rather than correctly evaluating one's own financial knowledge, is higher among men, highly educated individuals, and self-employed workers .

These results are in marked contrast to evidence from the comparison countries, where overconfident individuals are more likely to be found among women and among the less educated. ( Figure 2.3). In Italy the gender gap in overconfidence is slightly different, the women seems less confidence in self – assessment than man.

## 2.5 Overview

In this second chapter we tried to summarize the problems of financial literacy in Italy, in the first instance we retraced the Italian situation where we observe a very low degree of financial knowledge, especially we note a substantial gap between men and women.

On average the Italian has a low financial culture and a poor understanding of market trends and innovations, shows behavioral bias, is also adverse to losses and risk (especially women) and has a poor understanding of the decision-making process, this of course leads to marginal participation in financial markets.

Also, we observe the importance of financial education in financial literacy that is “ The process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being” ( Organization for Economic Cooperation and Development, , 10 November 2005 ).

Regarding the request for advice (sometimes informal, overall based on the advice of friends / colleagues / relatives), he shows a low willingness to pay for the service and has difficulty in evaluating the service received. All this photographs a lack of awareness of the importance of information exchange with the consultant and an insufficient familiarity with financial information.

Moreover we notice the Italian gender gap in general wealth, that derive mostly from lack of knowledge in this financial field. These differences are reflected in real estate wealth, financial wealth and inheritance received.



In addition, in these circumstances we wanted to analyze the current information and strategic framework of financial education currently in force in Italy which has improved, through many new initiatives, but unfortunately they are individual, broken up between them, sometimes not very innovative with regard to the methods used and they give little importance to the behavior of the subjects and finally it has an insufficient monitoring system of the results.

In conclusion , we have studied in depth the problem of under and over confidence which afflicts a lot of individuals, thus distorting the judgment of one's real financial - economic knowledge. That could cause the so-called illusion of control, that is the tendency to over-emphasize the role of personal skills or in the case of under confidence, lead to not participate in the financial markets, which means that they are less likely to hold investment products, to use debt instrument or to have private pension plans.

In Italy this is a relevant phenomenon, that see female less overconfidence than the male part but , the share of overconfident subjects is much higher in other European countries. However is important to keep in mind that being overconfident might be more of a problem in countries where the average level of knowledge is really low. In fact, what matters is not whether people are able to assess their level of knowledge correctly, but whether a wrong self-assessment increases the probability of making wrong financial decisions.

## CHAPTER 3

### Data, methods and empirical results

#### 3.3 Financial literacy and women : description of the questionnaire

As already underlined above, all the studies concerning financial literacy confirm that Italy ranks last among the countries with advanced economies. Within this context we find a significant gap between the two genders. With this paper we want to understand the level of financial literacy of the interviewees and which channels, styles and methods can capture the attention for the dissemination of targeted information.

Many people will wonder why this "restrictive" segmentation and the answer is as follows: the recent economic crisis has turned on the debate around the factors that prevent the economic system from returning to growth and among these, one of the most interesting issues has been developed around women's participation in the economy: if it is true that males have more knowledge in terms of financial subjects, when we look at behaviors, gender differences are greatly reduced or even canceled. In particular, women are more likely than men to plan for the long term (that is a key skills according to various financial education programs).

Women deal with money to a significantly greater extent than has always appeared in official statistics, having constantly taken charge of domestic management, children and the elderly because, as anthropologist Daniel Miller says "Women, more than men , in western societies they are addressed since childhood, to socializing paths that value savings and thrift as "love" forms towards loved ones ".

In this regard, the curiosity to investigate and study the drivers that marginalized women in the process of financial literacy was born, the tool used for this empirical survey is an opinion poll

created with Google form, the data collected concern a wide age range that goes from 18 to 80 years.

In the existing literature the variables that are most influential on the gender gap in financial literacy are gender, age, education, ethnicity and wealth / income. In all the studies done so far, women have a lower percentage of correct answers than men; moreover, they are less informed and interested in economic and financial issues and feel less secure. This must push public and private authorities to invest more in financial education for women.

As for age, the less literate are the under-30s and the over-65s. Young people, but especially the elderly, have problems answering simple questions about interest rates. Even the little education received is the cause of illiteracy and wrong choices regarding financing, people with a low level of education are more inclined, for example, to take on loans that are too expensive and consequently have a delay in paying rates.

Equally, the ethnicity of belonging is an indication of the level of knowledge: in fact, whites have a percentage of correct answers higher than all other ethnic groups, vice-versa African-Americans and Hispanics are the most lacking from this point of view. Finally, also the availability of wealth and high income are signals of higher knowledge and financial skills.

This research seeks to ascertain the aforementioned deductions and circumscribe them by means of only female segmentation with the aim of capturing the possible factors that make them more insecure and less prepared in this area despite having potentially the same capabilities as the opposite sex, and even tend to be more far-sighted .

Many initiatives have already been defined: information material such as bookmarks on which the key saving rules stand out, which must be constantly remembered: the risk / return ratio, the comparison to the advice not to sign what is not understood. And then the meetings between the

students in the schools, above all; but the real challenge is talking to adults, without forcing them to put them behind a desk after a day's work.

The role of Rai<sup>11</sup> is important: the public service is called to sensitize the public on the importance of topics such as inflation, diversification and compound returns, in fiction and games, according to the methods of product placement, which is much more effective than the traditional advertising spot. (Annamaria Lusardi, 5 giugno 2019).

The problem in all this is that, of these initiatives, few people know of its existence and the intent of this research is above all to understand which information channels are able to capture more interest and maybe decode the different needs of information transmission that the different groups of individuals have, especially women.

For example, there are new types of potentially interesting disclosures that could be extended to more people, such as the "Sole 24 Ore education month"<sup>12</sup>, where there are insights, analyzes, guides to protect readers in all the fields: from relations with banks and insurance companies, to understanding the basic financial instruments.

In addition, a series of videos are available on the newspaper's website to guide the public in daily decisions related to personal finance: from the choice of the loan to how to reduce the costs of current accounts, from how to avoid financial scams to the factors to consider to build oneself basic pension.

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<sup>11</sup> Radiotelevisione italiana is the national public broadcasting company of Italy, owned by the Ministry of Economy and Finance

<sup>12</sup>Over two hundred free initiatives throughout the peninsula, distributed among 70 cities, large and small, and with more than 30 associations and collaborations on the front line

The news organization is also very active on social media such as facebook and instagram, in fact social networks have now become an essential business lever for all companies, both large and small.

LinkedIn plays the lion's share, especially for B2B companies: not only is it known that it is the first circuit for the selection of employees, but it is also a tool to strengthen the brand of the company and of individual managers, including the top roles .

It is a powerful marketing channel and prospect generation for products and services. And it is a primary source of information, being also a container of valuable contents able to attract the interest of potential customers, partners and future collaborators. On social media, just a few words and a few photos are enough to quickly amplify a message.

Exploiting this powerful wave of digital innovation for literacy and information purposes could prove to be a winning strategy, although a certain interest is spreading towards these "alternative" educational methods, disclosure is not yet optimal and above all it could be reviewed, personalized and disseminated more than nowadays.

The following experimental analysis tries to answer two fundamental questions:

1. If the actual level of female financial literacy is influenced by socio-demographic variables.
2. If the information and educational channels available can be better implemented or translated and renewed through a different type of communication.

To answer these questions, a questionnaire was submitted to a female sample of 150 people (Appendix 1 contains the questionnaire given to the participants, with the related questions). This questionnaire was created with Google modules and was disseminated via social networks<sup>13</sup>. Data

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<sup>13</sup> What's app, facebook messenger and instagram direct

collection started on July 31st and ended on August 15th and the number of people reached is 150, the questionnaire is divided into three parts in the following order:

1. Test on financial literacy;
2. Socio-demographic information;
3. Deepening of information channels and market research

The first section on financial literacy consists of 5 multiple choice questions to measure financial skills. The questions asked range on basic finance topics: from the interest rate operation to the inflation rate. For the selection of applications, those administered by Lusardi in his paper were taken into consideration. (Lusardi Andrea Hasler OS, 2017).

Each question contains only a right answer and the others are wrong, in each answer there is a "I don't know how to answer" which is an important indicator to measure the under confidence and the preference to omission rather than error, common to the female gender, as seen in the previous literature.

The second section is on the classification of the sample in a socio-demographic location for a correlation study between financial literacy and the following drivers: age, civil status, size of the municipality of residence, children, level of education and income. For the questions section the ISTAT and OECD standards have been taken into consideration, the questions related to this part are six.

The third section has an informative purpose to study the relationship between the preferences of the sample information channels and the use of social media as a possible tool for collecting information of an economic-financial nature. We also want to understand if the same type of information communication is effective in the same way with male and female gender and to study

the methods of communication of the information, for example, if a type of visual information is more interesting and striking (graphics and figures ) then the numerical-textual one .

A particular focus will fall on the last questions that aim to investigate the ground to understand if there could be a possible interest by women towards new methods of financial learning and to understand if they are aware of the different systems of coding and decoding the existing information between two genders, also analyzing which of the already existing information methods, are more attractive for the dissemination and / or formation of economic contents. In this section there are eleven questions.

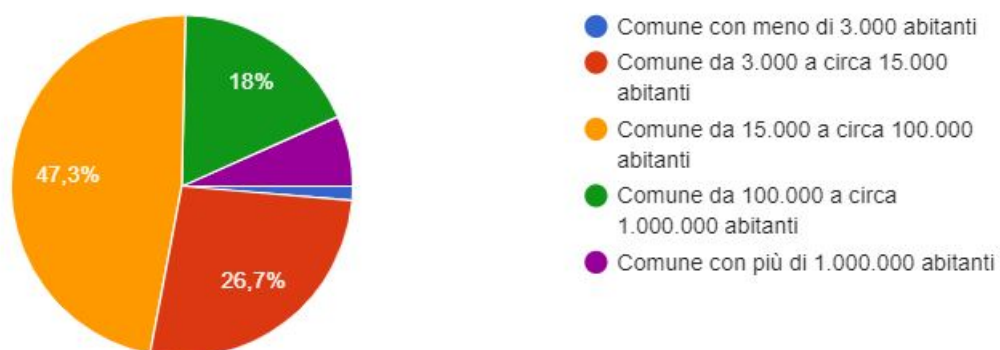
### 3.4 Sample section : socio-demographics characteristics

Before answering the two questions for which this experiment was carried out, the characteristics of the 150 survey participants will be analyzed and discussed.

Socio-demographic varieties of the sample:

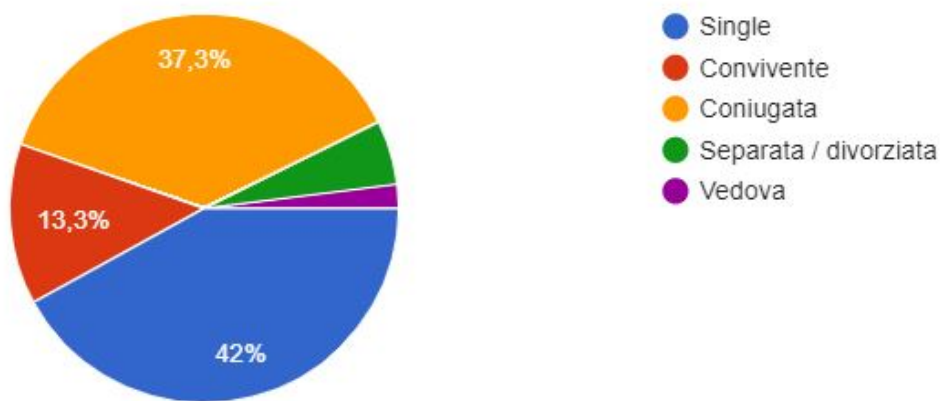
Figure 3.1

*Area*



The first socio- demographic question regard the area where the sample live, most of the women live in urban area (47,3 %), to follow we have small city with the 26,7 % of units. The size of the municipality of residence can impact the level of financial literacy. For example, in the most industrialized centers that have well organized university networks, it is possible that there is a more favorable climate for education in general and certainly impacting on financial education. In this case the North-South gap was not taken into consideration (which as we have seen before is relevant in terms of financial literacy) but the discussion is too vast and it was preferred to broaden the discussion on different drivers.

**Figure 3.2**  
*Civil status*



The second question regard the civil status of the women considered, the majority of the sample is single ( 42%) , the other important slice is married ( 37,3 %) and a small group of 13 % live with a partner. Obviously asses the gender gap to the civil status is reductive but we will see later if there is some correlation. In the current literature typically the degree of financial literacy of individuals is linked to demographic characteristics, such as family status, age, education and income.

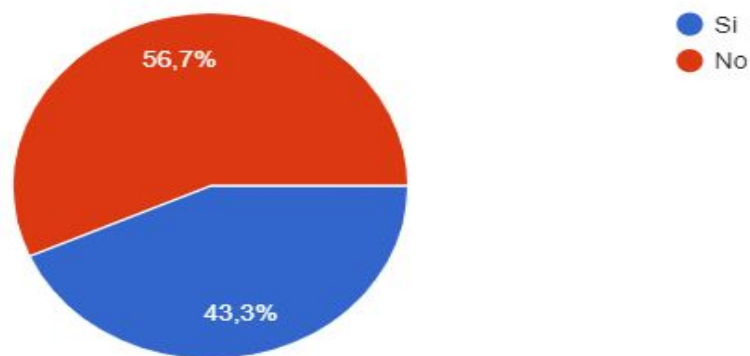
However, the data show that income, education and family status account for only 25% of the



gender gap. A hypothesis that could explain the remaining 75% of gender inequality is the traditional division of roles within the family, according to which in the couple the management of finances is up to men: as long as they live in pairs, women accumulate less knowledge in the field financial compared to married men. (Fonseca R. 2012)

**Figure 3.3**

***Progeny***

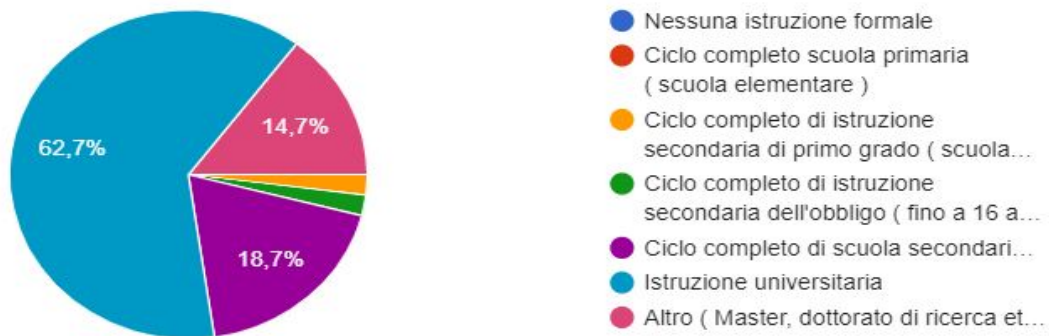


The third question is “ Do you have children?”, the 56,7 % of the sample do not have children meanwhile the 43,3 % yes. The issue of children is potentially relevant, seeing as current policies to support working mothers are fairly scarce and do not follow properly the Swedish model a parenthesis should be opened against a huge demographic collapse in Italy, largely linked to the unsustainability of the cost of living and the creation of a family unit.

But as far as financial literacy is concerned, the management of children could impact the division of roles within the family, giving to the man greater financial decision-making and consequently the woman could remain outside certain economic mechanisms.

**Figure 3.4**

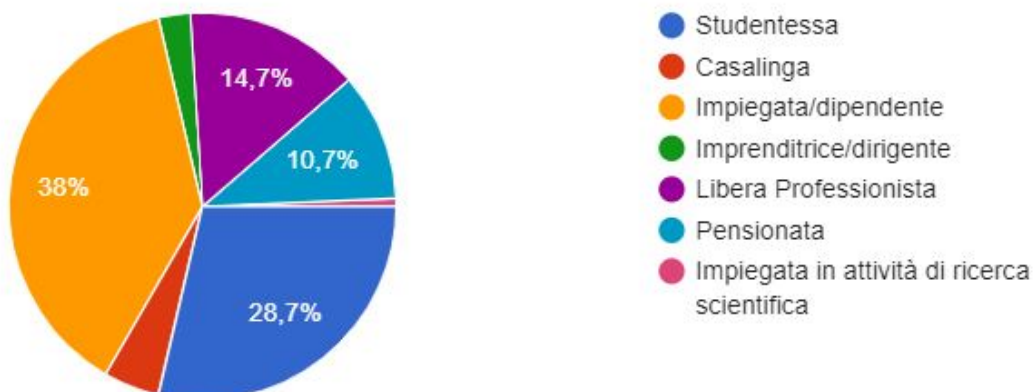
***Education***



Proceeding with the descriptive analysis, another factor that is analyzed is school education, or the title of acquired study. As can be seen from figure 3.4 , most of the individuals has a university degree ( 62,7%) , instead the 18,7% has got a diploma of the secondary school . The remaining number of participants instead has a post graduate title (14, 7%), . This factor can be useful to understand if who has a higher degree, also has a higher or lower degree of financial literacy, certainly is proof that the level of education is positively correlated with the degree of financial literacy.

**Figure 3.5**

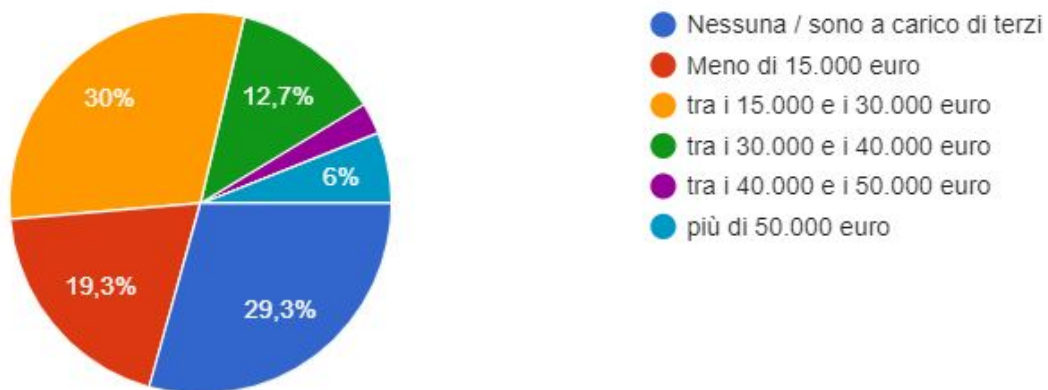
***Job title***



Another data analyzed is the current profession of the respondents. (figure?) The profession "students" and "Employee / dependent "form almost the 67 % of the job title of these women, respectively 28,7 % and 38 %. From the analysis of this question we can draw the following implication: the type of profession can give an indication on the level of experiences in the economic-financial field of each category. For example one student will have a lesser baggage of experience than what a student can have pensioner or a manager, who during his working life will have had to do different choices in this field. The economic and financial experience can also influence the level of financial literacy.

**Figure 3.6**

***Income***



Among the interviewees there is some variation of the results, the biggest slice is composed by an income related to the third parties / or absent ( 29%) and the other part of this slice is composed by an income between 15.000 and 30.000 euro (30 %). A relevant number of women has an income that correspond less than 15.000 euro per year ( 19,3 %). Only the 6 % of the sample earn more than 50.000 euro per year.

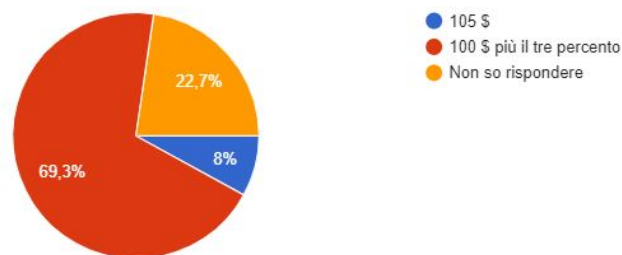
From these data it can therefore be deduced that most people cannot afford to make bad choices in the investments, as they could considerably affect their accumulated economic assets, for this reason is important have a good financial skills.

### 3.5 Empirical result : descriptive analysis of the evaluation test

On this purpose we will analyze each question, that is a sort of test extracted by Lusardi's paper<sup>14</sup>, and after this examination we will see which categories of women had wrong answers or had chosen the " don't know " one.

The first question is : *"Suppose you need to borrow 100 US dollars. Which is the lower amount to pay back: 105 US dollars or 100 US dollar plus three percent?"*

Figure 3.7



The answer is *"100 US dollars plus three percent"* and as we can see from the graph the 69,3 % gives the right answer, the 8 % of the sample erred ( 105 ) and an important slice answered *" don't know "*. Let's profile the sample:

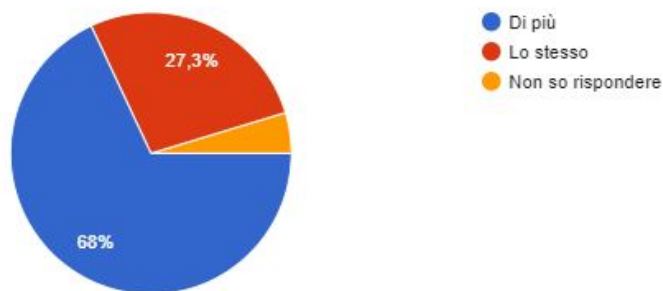
- 104 women gave the correct response, of which the age range goes from 21 years old to 80, the composition is various, for example most of the sample has at least a diploma in secondary school.
- 34 answered *" don't know "*

<sup>14</sup> Lusardi Andrea Hasler OS, 2017, "The gender gap in financial literacy: A global Prospective"

- 12 answered the wrong one ( 105 )

The second question regard the compound interest and is : “ *Suppose you put money in the bank for two years and the bank agrees to add 15 percent per year to your account. Will the bank add more money to your account the second year than it did the first year, or will it add the same amount of money both years ?* “

**Figure 3.8**

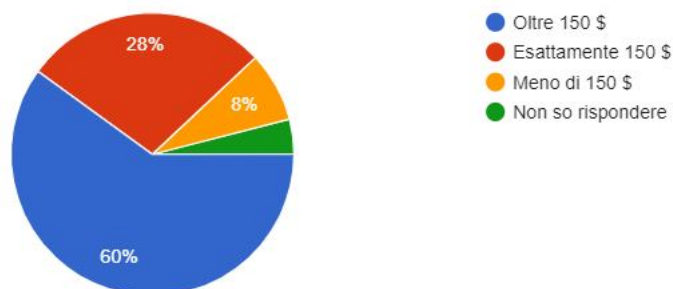


The answer is “ *more* ” and the sample is so composed by :

- 106 women gives the right answer
- 41 gives the wrong answer
- 7 answered “ don’t know ”

The third question is about the compound interest too and is : “ *Suppose you had 100 US dollars in a savings account and the bank adds 10 percent per year to the account. How much money would you have in the account after five years if you did not remove any money from the account?* ”

**Figure 3.9**

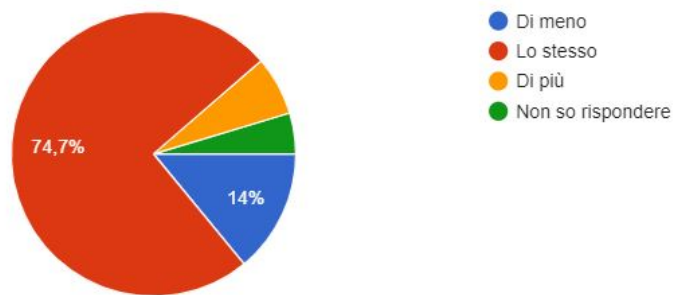


The correct answers is “*more than 150 dollars*” the sample is so composed:

- 90 women answered correctly
- 42 answered wrongly “*exactly 150 \$*”
- 12 responded “*less than 150*”
- 6 answered “*don’t know*”

The penultimate question is about the theme of inflation: “*Suppose over the next 10 years the prices of the things you buy double. If your income also doubles, will you be able to buy less than you can buy today, the same as you can buy today, or more than you can buy today*”

Figure 3.10

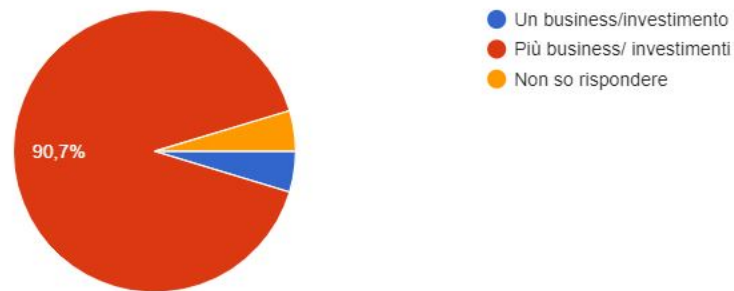


Here the correct answer is “*the same*”, and the sample answered in this way :

- 112 women answered correctly
- 21 answered wrongly “*less*”
- 10 responded wrongly “*more*”
- 7 answered “*don’t know*”

The last question is about the risk diversification : “ *Suppose you have some money. Is it safer to put your money into one business or investment, or to put your money into multiple businesses or investments?*”

Figure 3.11



The correct one is “*multiple businesses or investments*” , the answers is composed by :

- 136 gave the correct answers
- 7 gave the wrong response “*one business or investment*”
- 7 answered “ *don't know* “

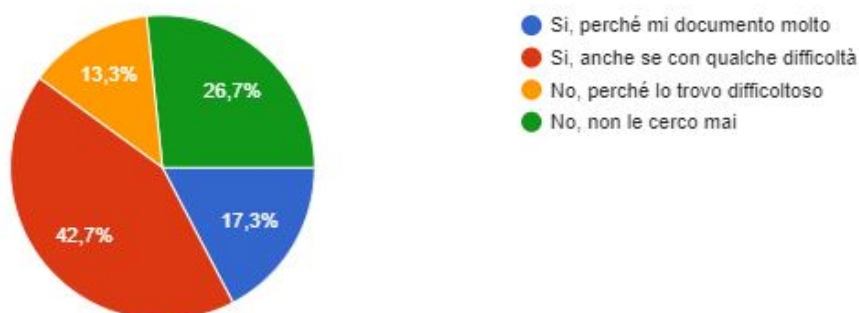
The scope of this section is understand if and in which percentage our sample is “ financially literate”, after this we will analyze which type of communication fit for women in relation of the different needs.

### 3.6 Empirical results: descriptive analysis of channels and media

The paper "The challenges of financial education" (CONSOB 2017) demonstrates the difference in the systems of coding and decoding information between the two genders and the need to use communication methods suited to the interlocutor. This section serves to identify which channels, methodologies and styles are favorable for the disclosure of economic-financial information. Let's see how our sample have been answer about this theme.

The first question is : *“Are you able to find economic information of your interest?”*

Figure 3.11



As we can see from the pie chart the 42,7 % find some difficulties to reach economic information, the 26,7% don't search this type of information at all, the 17,3 % is very well informed and the 13,3% find very difficult search and find economic news.

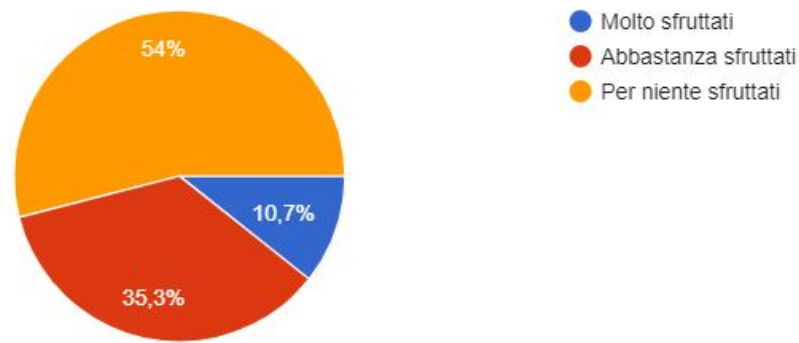
One of the main problem of the gender gap in financial literacy is not only the weak / insufficient competence on the financial themes , but often the lack of interest by the women on these issues, experienced as a male element. As we can notice one third of the female interviewed are not interested at all in seeking information on this subject.

It is therefore very important try to make women aware of the importance that this theme has in the daily life of each of them. (OCSE 2005)

The second question regard the universe of social media, more precisely the question is is : *“How much do you use social media (including instagram, facebook, twitter, linkedin and youtube) to read articles and find out about economic issues?”*



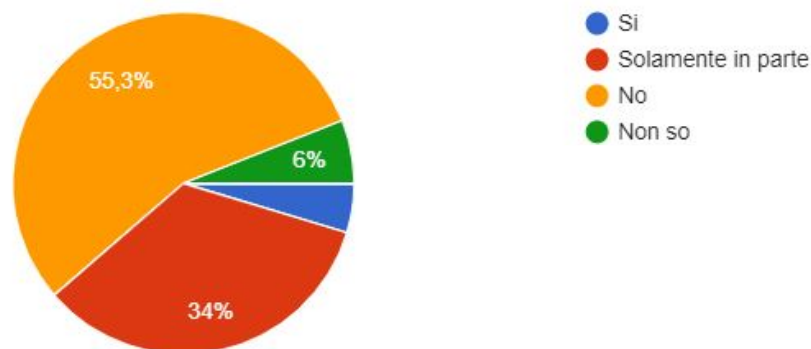
Figure 3.12



Here there is a huge evidence, the 54% of the women do not use the social media for economic information, the 35,3% think that they use them enough and only the 10,7% take advantage of them a lot. In reality the social media “world” is full of articles, video and games about the financial and economic theme. For example the LinkedIn<sup>15</sup> homepage is sated of in depth analysis of various kinds, above all that concerning the work and economic environment.

The third question want measure the satisfaction of the actual available instruments for education and divulgation about this themes, the question ask precisely : *“Do you believe that the current information structure (school networks, journalistic networks, social media and TV listings) offers sufficient financial and economic training?”*

Figure 3.13



<sup>15</sup> LinkedIn is an american business and employment-oriented service that operates via websites and mobile apps.

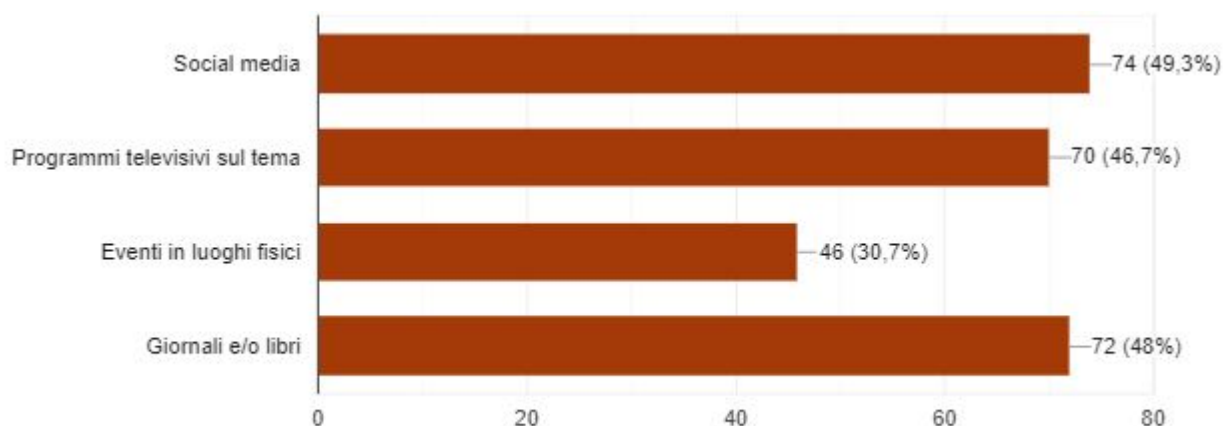
On 150 women interviewed 83 ( 55,3 % ) is agree about the fact that the actual economic education supply is not sufficient and the 34% believe that this supply is sufficient only in part.

This perception of the phenomenon could reveal the low coordination of the all cited actors abovementioned that gave the “illusion” of a lacking structure.

As underlined in chapter 2, according to the wide literature in this regard, all the initiatives for financial education initiated are often uncoordinated, unmonitored and privileged in northern Italy, above all with regard to school systems, that particularly suffer from the differences between the north and south Italy.

The fourth one is a question on the possible favorite information tool among : social media, tv program, events in physical place and newspapers/ books. The question is: “*Would you indicate to me, according to your opinion, which of the following information methods are more attractive for the dissemination and / or formation of economic content*”

Figre 3..14



The answers are quite proportionally , the prefer one is “*Social media*” with 49,3% of the preferences following the “*Newspaper and books*” and “*Tv Program* “ with the respective 48% and 46,7%. The last quoted are the “*Events in physical place*” with the 30,7 % of the consensus.

The prevalence of preferences in the use of social networks to inform oneself reflects the spread of this type of tools, especially among young people. A research by ASSIRM<sup>16</sup> (Milanese research company) carried out a survey in 2019 that explores the media usage habits of over 1200 young Italian university students of the Athena Network (the think tank of the 100 volunteer teachers who collaborate with Pubblicità Progresso). The sample consists predominantly of women (72%) and half of students in communication sciences, marketing and political and social sciences. The 65% of the students who inform themselves on internet channels choose social media (42%), online news (32%) and internet portal (16%). (Caterina Varpi, 2019)

Regarding the information on books / newspapers, we can imagine that the higher age groups devote themselves more to paper information, for example Audipress<sup>17</sup> in 2016 drafted the penetration rate of newspaper readers, divided by bands of age and we can see (though not by much) that there is a greater number of readers in the 45-54 age group.

- 14-17 years old 23,9%
- 18-24 years old: 31,4%
- 25-34 years old: 33,1%
- 35-44 years old: 35,1%
- 45-54 years old: 38,2%
- 55-64 years old: 37,8%
- Oltre 65 years old: 34,4% (Federico Ferrazza, 2016)

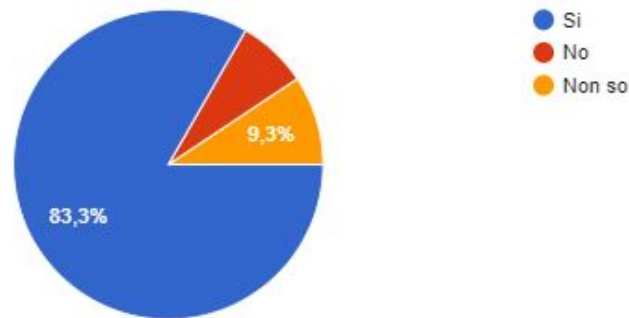
The fifth question concern the “modernization” of the economics information systems and the demand is : *“Do you believe that the disclosure of economic information should be renewed and updated through more "modern" channels (for example, digital applications and platforms)?”*

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<sup>16</sup> ASSIRM is the Association founded in 1991 in Milan that brings together the major Italian institutes of market research, opinion polls and social research.

<sup>17</sup> Audipress is a company that collects and publishes data on reading newspapers and magazines in Italy

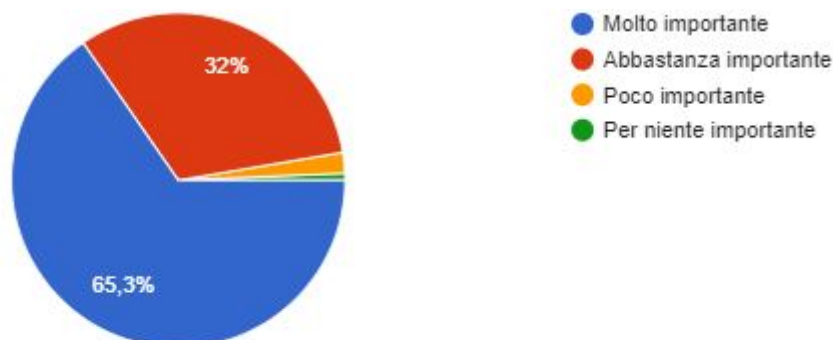
Figure 3.15



The 83 % believe that is important renew and implement the actual structure of the economic information, in the next chapter we want analyze the possible solution of a new type of economic information disclosure, but is obvious that the modernization is unlimited and the people want to improve and digitalize themselves more, to keep up with a continuous technological transformation.

The figure 3.17 concern the answers of the sixth question that is : *“How much, do you think, that technology is important for the economic-information system?”*

Figure 3.17

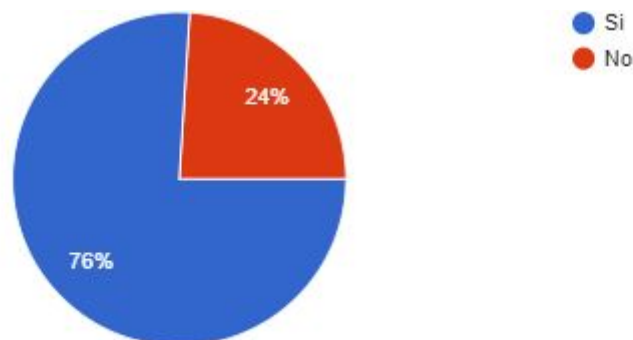


The 97,3 % believe that is very (65,3%) and quite (32%) important the role of technology in the world of economic information. The fact that the women consider necessary the fact that women consider the combination of technology and information necessary indicates the propensity to adapt

to the surrounding environment. The use of technology in the management and processing of information has assumed increasing strategic importance for organizations and citizens as a result of the internet boom in the 1990s. Today, information technology (digital devices and software programs) and telecommunications (telematic networks) are the two pillars on which the information society is based.

The seventh question is about the familiarity that the women considered have with the "home banking" platforms: *“Do you use existing digital platforms for purchasing, home banking and investment management?”*

Figure 3.18



As we can see from the pie chart 114 women on 150 use the “ home banking system” for the management of their own money and for the various movements that are allowed within these apps, the remaining 24 % (36), is not able and don’t use this tools.

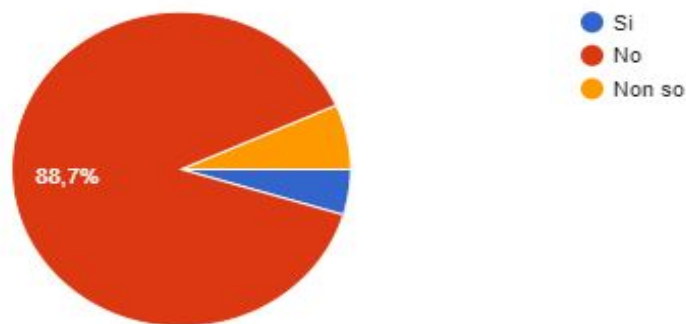
The familiarity in the use of bank tools is very important, actually in Italy is still among the countries with low e-banking spread: 34% of individuals use web banking services (31% in 2017 and 29% in 2016). After us only Cyprus, Greece, Bulgarians and Romania. Also in this field there

is a consistent gender gap, in the Italian female population the use of e-banking stops at just 29%, against 39% of men. ( BEM Research s.r.l, 2019.)

The 24 % is not so low considering that according to recent estimates, the lack of use of technologies such as online banking, combined with financial ignorance creates losses of wealth even in the simplest financial instrument we all possess, namely the current account.

The eighth question serves to understand if the interviewees know (online) platforms dedicated to women's financial education : “Do you know platforms and / or applications for financial education oriented to women?”

Figure 3.19



There is an evidence of the 88,7% that the major part of the sample don't know any platform on this field, only a minimum part is aware of some specific platform.

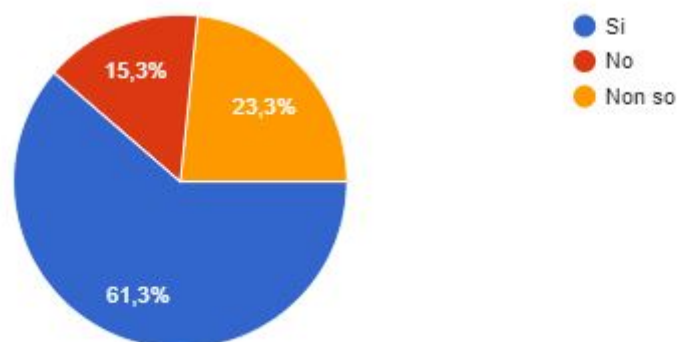
Actually after several researches, online there are not many sites for financial education (if not a few lessons on YouTube ), and above all for women there is very little especially in Italy.

To mentioning a few ( not properly well known ) there are:

1. “Donne al quadrato 2019 “ of the Global Thinking Foundation ( Credem, 7 Marzo 2019 )
2. “Quello che conta.gov” initiative of the Education Minister (Comitato per la programmazione e il coordinamento delle attività di educazione finanziaria, 2018-2019)
3. “ Conta sulle donne” edited by Rai Education ( Rai Education, , 2016)

The ninth question is an investigative one: *“If you find about a platform specifically designed for women for financial information, would you take advantage of it? “*

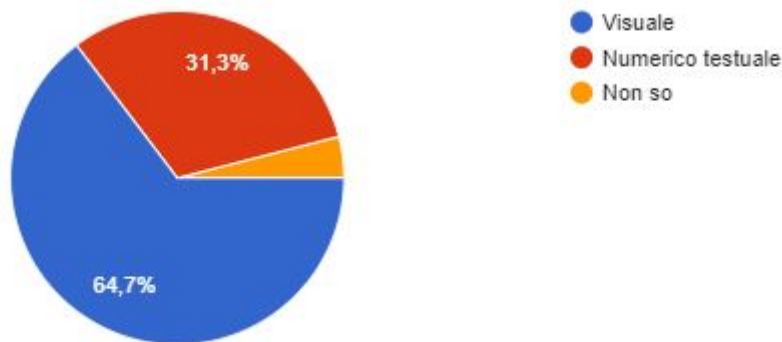
**Figure 3.20**



The chart is varied but with a prevalence of “yes” (61,3%), following the “don’t know” (23,3%) and at the end “ no ” (15,3 %). There is an important proof that we can draw, or rather that women are inclined to explore educational platforms born for their different needs, and the part of “don't know” however could be easily convertible with an "attractive formula", for example a good marketing plan or an effective Tv advertising.

The penultimate question concern some preferences, mostly about the form about the type of communication : “ *Do you generally prefer a type of visual information (graphs and figures) or numerical-textual information?*”

**Figure 3.21**



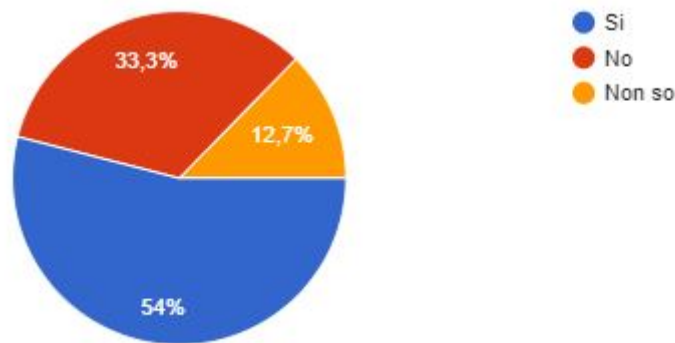
The 64.7% of the answers are in line with the literature on coding and decoding information that effectively discern between men and women, where the former tend to have preferences for information described in numerical- text approach, while women prefer graphs and figures for reading information.

In fact Lusardi, Mitchell e Curto discovered that the way questions are asked also causes a different reaction between women and men: when the same question is expressed using technical terms, women are more intimidated and tend to respond more often "I don't know". We are different, therefore, also in the sensitivity with which we perceive information and in the ways in which we react: "female" financial education programs have proved particularly effective in changing women's sensitivity to the subject and their behavior. But it is necessary to develop different communication channels and forms for the different ways in which we acquire knowledge: women prefer visual information, such as graphics and figures, while men prefer texts and numbers. (Serena Boccardo, 18 Ottobre 2012)



The last question is linked with the previous one and regard the effectiveness of decoding information between male and female “Do you think that the same type of communication of information is equally effective with male and female people?”

Figure 3.22



The 54% of the women believe that the same type of communication of the information is equally effective with male and female, this can be explain by the fact that women “feel” to understand alike men, in reality there is a difference in the way that the things are perceived and recognize between male and female, think about the style of communication or the psychological side of the two genders, there is an evident difference that should be taken into account before the disclosure of the information ( both economic and not ) and in the type of education give.

Tannen, a well-known scholar of gender and language differentiation, in her best-known text of 1994 reports the main differences in communication styles between men and women, the first most attentive to the value of independence and hierarchical comparison, capable of acting a language more tied to actions, objectives and more peremptory styles, and women more sensitive to the value of interconnection, relationality and networking, as well as more experienced in adopting a more possibilist language. Differences that were then found in a rich literature, also connected to consumer behavior ( Deborah Tannen, Oxford University Press, 7 lug 1994).

## CHAPTER 4

### Reflection based on data and platform proposal

#### 4.1 Consideration and results : insecurity and interest compound problems

In this paper part we will analyze, through the isolation of the non-literate women ( those that not pass the test in the second part of the survey) so as to be able to analyze their preferences and go to investigate by what means one can go "bridging" their financial gap. Before isolating the sample, however, we analyze the total of the answers, illustrated in the previous chapter through a consideration of the results.

A person is defined as financially literate when he or she demonstrates understanding (via correct answers to the questions) of at least three out of the four financial concepts noted above. For the compound interest there are two questions but it has value one, so if you are wrong one out of two you are not considered suitable in understanding this theme (Andrea Hasler Annamaria Lusardi, July 2017 ). On 150 women tested, 57 gave wrong answers on more than one concept ( for being financially literate you must know at least three out of four concepts ) proposed, this means that the 38% of the interviewed is not “ financially literate”, On 150 women 45 answered at least a “ don’t know” but the important datum is that on 45 women that answered “don’t know”, 44 are not financial literate.

In fact, 44 women out of 57 who are not financially literate answered "I don't know" to at least one of the three questions. This last datum is a symptom of female insecurity in financial literacy and not of greater ignorance: the studies by Webster and Ellis (1996)\* prove that even among financial consultants the level of confidence in their knowledge is lower than the male colleagues.

Anna Maria Lusardi\*interpreted the results of a recent survey conducted in Germany\*in the same way: the interviewees were asked the same question in two different periods (in 2007 and 2009) but while during the first wave, it was possible to indicate only the correct answer or the wrong one, during the second wave the possibility "I don't know" was included. More than 70% of women who answered "I don't know" in the second period, had responded correctly beforehand: this data can be read as a sign of lack of confidence in their financial knowledge; unfortunately the sample interviewed was too small to be able to draw further conclusions in this regard.

The female attitude to greater prudence in financial matters has proved invaluable in other areas but also has a negative aspect: overall the gap in financial literacy is not filled by a corresponding recourse to a specialized operator. In nutshell, women trust neither themselves nor those who should advise them. Generally, recourse to financial advice is more frequent in individuals who already have a greater knowledge of the subject: if women have, on average, lower levels of financial knowledge than men and are not inclined to rely on specialized advice, they risk more than men to badly plan their own pension plans, make bad investments and run into scams.

According to the Expectation theory<sup>18</sup> the gender inequalities are also due to status beliefs, girls could be less self-effective in knowing and managing money than boys, because their assessment is influenced by a status conviction. This could explain why the number of women who answer "I don't know" in financial literacy tests is higher than the number of men, even when they know the right answer ( Bucher-Koenen et al., 2016).

The solution to unhinge this insecurity could lie in the parental education and the profession of the parents and / or the guardians and the professional experiences of women. As far as professional

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<sup>18</sup> Expectation theory is a social psychological theory, introduced by Joseph Berger\* and colleagues, which explains how the expected competences form the basis of status hierarchies in small groups. The most known branch of the theory, the theory of status features, deals with the role of specific social information such as race, gender and specific skills in the organization of the hierarchies themselves)

experience is concerned, Chen and Volpe (2002) point out that in the United States, in college, students with less professional experience tend to be less prepared in financial subjects.

Thus, work activities (quantity, type and starting age) can significantly affect financial literacy. In Italy there are valid findings of the fact that males experience work in advance of females (ISTAT, 2002; Finocchietti, 2004; Dei, 2006; IRES, 2008), so it can be assumed that the gender gap in the financial literacy develops in adolescence and strengthens into adulthood, reflecting gender differences in the age of first professional experience and in the number of hours worked.

Having said that, one of the many "solutions" to the problem of the gender gap in financial literacy could be to start a working activity in adolescence, but this is not enough, it is necessary to undertake a multidisciplinary, behavioral, motivational and experiential path aimed at women .

Another interesting correlation that could be proposed as a "solution" is the positive connection between donations, trust towards others and volunteering with the level of financial literacy. For example, in research survey and savings of supply, we can see in the various statistical surveys that a positive and statistically significant correlation exists between financial literacy and donations. The fact that it is statistically significant is not random: as in the case of volunteering, it is likely that other factors, such as the level of education or private preferences, influence both the choice to donate and the level of financial literacy of the individual.

The last relevant aspect, lie to the management of the money that the family teach to the children , informal financial education at family level seems to be very effective in rising the financial education at home, even if other factors such as entrepreneurship, often transmitted in the family, could influence both.

In the literature, moreover, there is a positive correlation between the level of financial literacy and the "pocket money", certainly because it accustoms itself to saving and managing from an early age. In Italy the "pocket money" is not very widespread: only 23% of the sample declares to have perceived it between 8 and 12 years. It is more common to have received money for small housework (43% of the sample carried out small housework that was re-paid in the 8-12 age group; 46% did odd jobs in the 12-16 age group). Also the independence (total or partial) in the management of one's own money from children (8-12 years) and having received a real education in savings are rare, while it is common to have received teachings related to the planning and control of expenses. (N. Linciano e P. Soccorso, Ottobre 2017).

Males and females have also received, on average, a different education, in line with the traditional cultural gender stereotypes, the girls were mainly taught to save and to plan and control expenses, while the children have had more experience with compensated jobs and have had greater spending autonomy. On this front, however, things are slowly changing and a strong generational effect is evident, testifying to the progressive change in educational methods (Eleonora Brandimarti, Flavia Coda Moscarola, Elsa Fornero, 2017 ).

Another factor, which in the study of the answers of the questionnaire has jumped to the eye, is the significant margin of error on the topic of the "compound interest". Given that the sample considered is not totally representative of all Italian women, it is worth pointing out that from the correction of the literacy test it can be seen that there are errors on the topic of compound interest, in fact the two questions: "" Suppose you put money in the bank for two years and your bank to add 15 percent per year to your account. Will the bank add up to the first year, or will it be the same amount of money both years? "And" Supposed you had 100 US dollars in a savings account and the bank adds 10 percent per year to the account. How much money would you have in the account after five years if you did not remove any money from the account? ", Respectively the 27 and 28% of the sample made the wrong answer, this means that a third of the interviewees did not understand

the operation of this calculation methodology. We understand why this topic is very important, Albert Einstein said that compound interest is the most powerful force in the universe, aware of the fact that thanks to compound interest even with a small amount of capital to invest, a good return is obtained especially by patiently exploiting the lever of time. We talk about compound interest when interests, instead of being collected, are added to the initial capital that produced them, generating interest in turn. Not having grasped this concept means spending more on transactions, contracting greater debts, sustaining higher interest rates on loans, practically borrowing more and saving less. (Enrico Marro, ,25 Novembre 2015).

In 2013, Istat puts on paper these staggering results in a research on complementary pensions carried out for the Supervisory Commission on Pension Funds <sup>19</sup>. The research provides a bleak picture of the economic preparation of Italians, starting with workers, among whom almost half, 47%, fail to understand the effects of compound interest on capital in a current account.

So in addition to being a problem of the interviewees of this paper, the question is much broader and affects everyone, so it is important to educate and find efficient solutions to understand this issue and monitor its improvement. (Giovanni Angioni,, 11 febbraio 2013).

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<sup>19</sup> The Supervisory Commission for Occupational Pension Funds (OAK BV) was launched on 1 January 2012 as an independent federal commission, not subject to any instructions from the Federal Council, consisting of eight experts and a dedicated secretariat. The commission's task is to ensure uniform supervision of all cantonal BVG (occupational pension fund) regulatory authorities. In addition, the commission can issue instructions to pension actuaries and auditors and is the regulatory authority for pension actuaries. The BVG Security Fund, contingency fund and BVG Investment Foundation are directly under the commission's supervision.

## 4.2 Statistical methods and results : isolation of financial illiteracy

In the third part of the questionnaire drawn up with Google Form, questions were asked relating to the existing and preferred methods of economic disclosure, to the style of communication most appreciated and to the confidence with the technological world that one has.

In analyzing these factors, through a statistical analysis, we selected the non-financially literate women (correcting the test in the second part of the questionnaire) placed in a socio-demographic context and we saw the percentages of preferences on the different topics of the third part of the survey. Following are the statistical methodology and the selection of the data involved.

Quantitative data were presented as mean and standard deviation (sd), categorical data were presented as absolute value and percentage:

- The percentage of women not financially literate was estimated with Copper-Pearson confidence interval at 95% ( CI95%)
- Chi square test was used to compare categorical variables and T Student test to compare age.
- A p value <0.05 was considered statistically significant. Stata 14.1 was used for all analysis.
- Data about 150 women between 18 and 80 year (mean age 39 years sd 16.4) was collected.
- Fifty-seven ( 38.0% CI95% 30.2-46.3 ) women result not financially literate.
- Percentage of financially literate is not different between categories, unless for Job (percentage of financially literature are higher in workers than in student or housewife) and income.

Table 1 Distribution of financially literate or not by categorical variables and mean age

	financially literate		not financially literate		p
N	93		57		
age (mean, sd)	40	15.9	38	17.2	0.453
class of age					0.152
<35	40	55.6	32	44.4	
35-55	37	72.5	14	27.5	
> 55	16	59.3	11	40.7	
Civil Status					0.333
single/widow	43	58.1	31	41.9	
Married	50	65.8	26	34.2	
Education					0.440
before università	23	67.6	11	32.4	
univesity or master	70	60.3	46	39.7	
Area					0.729
< 15000 inhabitants	28	66.7	14	33.3	
15000-100000 inhabitants	42	59.2	29	40.8	
> 100000 inhabitants	23	62.2	14	37.8	
Progeny					0.111
No	48	56.5	37	43.5	
Si	45	69.2	20	30.8	
Job					0.009
retired / housewife	11	47.8	12	52.2	
Student	20	46.5	23	53.5	
Employee	44	75.9	14	24.1	
entrepreneur / freelancer	18	69.2	8	30.8	
Income					0.035
< 15000 euro	39	53.4	34	46.6	
> 15000 euro	54	70.1	23	29.9	



### 4.3 Answers of third part from not financially literature women

Forty-two percent of not financially literature women are able to find economics information with some difficult, 11 women (19%) are not able because they find it difficult and 19 women (33%) don't find them. Social are not used to read and find economics issues from 61% of women not financially literature. The 54% of women believe that current information are not enough and the information method is less chosen is physical place.

Fifty women on 57 (87%) believe that the disclosure of economic information should be renewed and updated through more "modern" channels, and 39 (68%) believe that technology is very important for the economic-information system, 34 women (64%) will take advantage of platform specifically designed for women for financial information and the visualization preferred is Visual for 61% of women and thirty-one women (54%) think that the same type of communication of information is equally effective with male and female people.

*Table 2 Third part- women not financially literate*

N	not financially literate	
	57	
Are you able to find economics information of your interest?		
Yes, because I'm informed	3	5.3
Yes, but with some difficult	24	42.1
No, I don't find	19	33.3
No, because I find it difficult	11	19.3
How much do you use social media (including instagram, facebook, twitter, linkedin and youtube) to read articles and find out about economic issues?		
Very used	8	14.0
Sufficiently used	14	24.6
Not used at all	35	61.4

Do you believe that the current information structure (school networks, journalistic networks, social media and TV listings) offers sufficient financial and economic training?

Yes	3	5.3
Only in part	16	28.1
No	31	54.4
I don't know	7	12.3

Would you indicate to me, according to your opinion, which of the following information methods are more attractive for the dissemination and / or formation of economic content (You can choose more than one option)

Social media	26	45.6
Tv program	25	43.9
Events in physical place	18	31.6
Newspapers/ books	26	45.6

Do you believe that the disclosure of economic information should be renewed and updated through more "modern" channels (for example, digital applications and platforms)?

Yes	50	87.7
No	3	5.3
I don't know	4	7.0

How much, do you think, that technology is important for the economic-information system?

very important	39	68.4
quite important	15	26.3
little important	2	3.5
not at all important	1	1.8

Do you use existing digital platforms for purchasing, home banking and investment management?

Yes	40	70.2
No	17	29.8

Do you know platforms and / or applications for financial education oriented to women?

Yes	2	3.5
I don't know	4	7.0
No	51	89.5

If you find about a platform specifically designed for women for financial information, would you take advantage of it?

Yes	34	59.6
No	10	17.5

	I don't know	13	22.8
Do you generally prefer a type of visual information (graphs and figures) or numerical-textual information?			
	Visual	35	61.4
	Numerical-textual	20	35.1
	I don't know	2	3.5
Do you think that the same type of communication of information is equally effective with male and female people?			
	Yes	31	54.4
	No	17	29.8
	I don't know	9	15.8

---

#### **4.4 Architecture of a platform : informative instagram page**

In the third part of the questionnaire drawn up with Google Form, questions were asked relating to the existing and preferred methods of economic disclosure, to the style of communication most appreciated and to the confidence with the technological world that one has. In analyzing these factors, through a statistical analysis, we selected the non-financially literate women (correcting the test in the second part of the questionnaire) placed in a socio-demographic context and we saw the percentages of preferences on the different topics of the third part of the survey. Then the architecture of a possible web platform able to satisfy the needs of a possible user base was proposed..

Given the results obtained by the survey, we can see that women who have a job and earn more than € 15,000 a year are more literate than female students and housewives. We have seen how students are the supporters of information on social media and as more and more women allow themselves to be fascinated by this tool, through the survey we have found by non-literate women an important curiosity towards a possible platform on the subject of financial literacy. To be able to choose the

methods of dissemination, the same channel preferences to be used for information gathering were asked and we can see how social media and books have the first place in the ranking.

A question regarding the use of home banking and the familiarity that women have with these instruments was also examined, given that financial education is strongly influenced by the use of phone banking, Internet banking and mobile banking services . . . Obviously age, gender and education influence this choice, which suggests that the demand for face-to-face services in the branch remains high and that the people who use home banking instead have a specific profile: they are more educated, more young people, they have a good basic financial knowledge and are mostly men, once again emphasizing the existence of gender differences in preferences towards the bank. In fact, with the same education, level of financial knowledge and age, women are less likely to use home banking services, preferring to turn to the branch. Not surprisingly, 30% of the sample, considered non-literate analyzed in this paper, is not familiar with these tools, the data could be influenced by various statistical distortions, but it should not be underestimated.

Another preference that emerges regard the "visual" or graphic-illustrative type of communication instead of the classic numerical-textual models. Finally we note how for most of the interested parties, the communication language does not differ between men and women, in reality this last aspect is slightly distorted, in fact, as mentioned above, the coding and decoding of information undergoes different procedures between the two gender. As recalled, Lusardi, Mitchell and Curto also the way in which the questions are asked cause a different reaction between women and men: when the same question is expressed using technical terms women are more intimidated and tend to respond more often "I don't know" . We are different, therefore, also in the sensitivity with which we perceive information and in the ways in which we react: "female" financial education programs have proved particularly effective in changing women's sensitivity to the subject and their behavior. But it is necessary to develop different communication channels and forms for the different ways in

which we acquire knowledge. So a diversity in the reception and decoding of information not only exists, but must be exploited for specific programs.

In meeting all these needs, we thought a tool, widely exploited for different themes, which is that of an Instagram profile. As is now known, Instagram is a social media in the top three of the most used in the world (daily active users in the world: 500 million), and has a media power like few have, we see its structure and how it is possible to address it for our informatics scope and educational purpose.

The most important features of Instagram are:

- Possibility to take photos with high definition filters for better photos.
- Possibility to support larger photographs.
- Ability to geolocate and tag photos (in order to share experiences with other users).
- Ability to upload videos up to 60 seconds and GIF Boomerang.
- Direct, or send a photo to a user without publishing it.
- Advertising: advertising of sponsored content (for a fee), available for companies or not.
- Instagram stories, images and videos that remain visible only for 24 hours and are not published.
- Direct, that is the possibility of transmitting videos in live streaming, interacting with the users who comment.
- IGTV, the new platform within Instagram for sharing full-screen videos, just as if you were watching a mini TV from your smartphone or tablet, the maximum duration of the video is usually 60 minutes. (Welcome to Instagram, 6 ottobre 2010)

The first thing to keep in mind is that, unlike other platforms, Instagram is used more by women (51%) than by men, and this is already the first point that interests us most, the second point concerns the age group of Instagram users who are between 19 and 24 years old, I remember that among the socio-demographic drivers of low financial literacy we have as an interested segment the very one among the female students (also and especially in this band), so also in this case the platform is well suited to the needs.

The other important factor is the need for a more visual style of communication, which Instagram fully complies with, thanks to its multiple functions, which are more visual than textual, not to mention the fact that the women of the sample, mostly, would like to be informed on a social media.

Obviously this type of tool can do nothing but revolutionize and bring women closer to the technological process underway, which as pleasing by them, would make and still make the usability of content more immediate and intuitively.

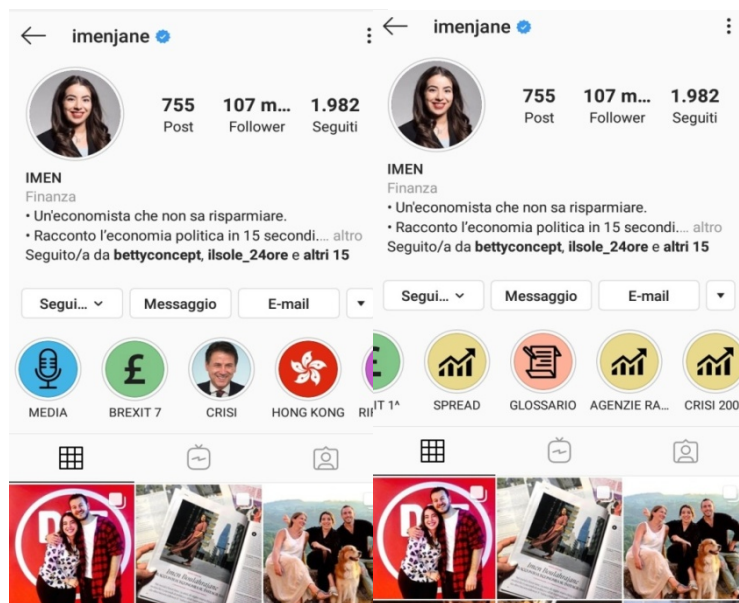
#### **4.5 Imen's model**

Imen Boulahrajane, better known as Imen Jane on social media, is the new Instagram star thanks to her more than 100 thousand followers. To distinguish it from other influencers is the passion for the political economy and for the hottest topical issues. He defines himself as "an economist who does not know how to save" and has the aim of spreading and explaining in a "simple but not simplistic" way the events of today's national, European and world politics as well as the basic economic concepts.( Propensione.it, 14 agosto 2019 ).

We take this girl as a model because the construction of his Instagram page works well, her popularity is growing over the years and the choice of communication mode is perfect for the target of women that we want to reach, combining the needs of more graphic use than numerical the

numerical one and is mainly followed by a female majority (70% of imen's followers are women). The explanation of the contents is programmatic and effective, the architecture of the "stories" is designed to capture the attention of its audience. Imen highlights relevant economic and political issues in her "stories in evidence", so you can consult when you want the topics explained. In the case of financial literacy, stories could be suggested with advice on books and scientific papers on each topic being tested on literacy (interest, risk and inflation).

Figura 4.1



In addition, she daily produces a press review of all the relevant news from the European and non-European economic political world, extracting the topics from the most important economic magazines (New York Times, Financial Times, Sole 24ore, etc.). Reading the newspaper remains among the main systems appreciated by the sample interviewed for the dissemination of information and this could be an excellent substitute for the classic reading of newspapers, more smart and appreciated with a modern and attractive graphics( Giuliano Molossi,11 Marzo 2019).

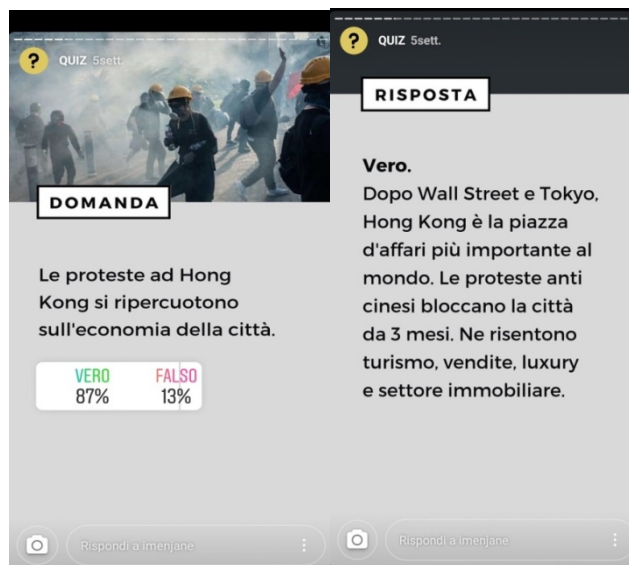
Figura 4.2



Another interesting factor on her page, are the quiz with a theme to ascertain and monitor user feedback and test the actual understanding of the topics, this could also concern the topics covered by this paper, for example you can explain what is the compound interest and ask questions about it.

This system could be use in different ways and for different topics and it can be used also for deepen and review some old topics. For example, during the Hong kong devolution, Imen asked the question on this topic with the consequent right answer:

Figura 4.3





In conclusion it can be argued that this model of information dissemination is the most complete and adequate in order to respond to many of the needs drawn from the survey that was proposed in the third chapter.

With the insertion of the contents in multiple languages and with the careful choice of the topics to be treated we can think of extending this communication model on several levels and spreading it also among the institutions that deal with financial literacy and gender disparity, strengthening the current educational strategies in place (in Italy and in other countries) and integrating them with these new modern and technological tools, allowing a better and even educational use of social networks, in order to inspire different actors involved to use it as a means of education and not just for entertainment.

## CONCLUSION

Given the constant change in the economy and politics over the years, individuals today and even more so, future generations must be able to make informed financial decisions that are as efficient as possible, based on their economic assets and their set goals.

Financial literacy is now considered a necessary capacity, in order to face an economic context like the present one, the issues of financial literacy and financial education are becoming more widely acknowledged worldwide, especially after the outbreak of the 2008 economic crisis, the individuals in general must have a minimum knowledge and ability to make financial decisions in an informed and effective way.

Several major studies have revealed important gaps in terms of financial literacy at the global level, especially a substantial difference in knowledge was found between men and women on the subject, these gender disparities are more marked in Italy, in poor countries and those in the process of development.

The greater financial vulnerability of women derives from several factors: certainly from a lower presence in the labor market, from a salary that is often lower than men, but also from the scarce interest of women in investing their savings also for social security purposes . All this strongly penalizes women in the face of a much longer life expectancy than men (in Italy the widowed women are almost 5 times the widowed males).

By virtue of all this, this paper has set itself the objective of identifying the problems upstream of this gender gap and then finding possible solutions, through the identification of gaps in the system, which can reduce this discrepancy.

In the first chapter the existing literature on the problem was reviewed, breaking up the financial literacy into three elements, the financial knowledge, the financial behavior and the attitude that people turn to it. The arguments were based mainly on an analysis of the average of the G20 countries but there are clear differences in performance and trends between countries, resulting from multiple factors that have a thousand facet. The resulting score is therefore driven primarily by financial behavior, which contributes up to nine of the twenty-one possible points, this reflects the general understanding that financial well-being results primarily from positive behaviors and that financial education therefore needs to ultimately change behavior to improve financial well-being.

In the second chapter we discuss the topic of financial education that is “ The process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being”. Another argument in the second part of the paper is the division of wealth between men and women in Italy that could cause the so-called illusion of control, that is the tendency to over-emphasize the role of personal skills or in the case of under confidence, lead to not participate in the financial markets, which means that they are less likely to hold investment products, to use debt instrument or to have private pension plans.

In Italy this is a relevant phenomenon, that see female less overconfidence than the male part but , the share of overconfident subjects is much higher in other European countries. However is important to keep in mind that being overconfident might be more of a problem in countries where the average level of knowledge is really low. In fact, what matters is not whether people are able to assess their level of knowledge correctly, but whether a wrong self-assessment increases the probability of making wrong financial decisions.

The research "The challenges of financial education" (CONSOB 2017) demonstrates the difference in the systems of coding and decoding information between the two sexes and the need to use communication methods suited to the interlocutor, and on the basis of this, in the third part of the paper we wanted to understand the level of financial literacy, by assigning a survey to a sample of women, and which channels, styles and methods can capture the attention for the dissemination of information targeted on the economic theme financial. In this regard, thanks to the google form platform, a survey was published containing 23 questions divided into 3 sections to a sample of 150 women, the responses of each were analyzed and then drawn the conclusions in the following chapter. Finally in the last chapter one can find all the conclusions of the results with the consequent problems attached to certain answers, all the methods and the empirical results and an architecture of an instagram page model, inspired by a page of an economist and adapted to the needs of the interviewed sample. The conclusions drawn from this elaborate, however, should be further investigated, carrying out other experiments with a more representative sample and analyzing in an even more detailed way all the existing literature in order to be able to disseminate and contribute to the elimination of this problem, which could lead to a positive impact on our whole life and on the planning of a better future.



# APPENDIX 1

## Survey

### Alfabetizzazione finanziaria e differenze di genere

Tutti gli studi inerenti l'alfabetizzazione finanziaria confermano che l'Italia si classifica all'ultimo posto tra i paesi con economie avanzate. All'interno di questo contesto troviamo un significativo divario tra i due sessi. Con questo sondaggio si vuole comprendere il livello di alfabetizzazione finanziaria delle intervistate e quali canali, stili e metodi possono catturare l'attenzione per la divulgazione di informazioni mirate.

\*Campo obbligatorio

### Classificazione socio-demografica

1. Età \*

2. Qual è l'ampiezza del suo comune di residenza? \*

Contrassegna solo un ovale.

Comune con meno di 3.000 abitanti

Comune da 3.000 a circa 15.000 abitanti

Comune da 15.000 a circa 100.000 abitanti

Comune da 100.000 a circa 1.000.000 abitanti

Comune con più di 1.000.000 abitanti

3. Potrebbe indicarmi il suo stato civile? \*

Contrassegna solo un ovale.

Single

Convivente

Coniugata

Separata / divorziata

Vedova

4. Ha figli ? \*

Contrassegna solo un ovale.

Si

No

5. Qual è il suo livello di istruzione formale? \*

Contrassegna solo un ovale.

Nessuna istruzione formale

Ciclo completo scuola primaria ( scuola elementare )

Ciclo completo di istruzione secondaria di primo grado ( scuola media fino a 14 anni )

Ciclo completo di istruzione secondaria dell'obbligo ( fino a 16 anni ) e formazione professionale

Ciclo completo di scuola secondaria ( scuola superiore ) Istruzione universitaria

Altro ( Master, dottorato di ricerca etc...)

6. Che figura professionale ricopre? \*

Contrassegna solo un ovale.

Studentessa

Casalinga

Impiegata/dipendente

Imprenditrice/dirigente

Libera Professionista

Pensionata

Impiegata in attività di ricerca scientifica

7. A quale fascia di reddito (lordo) appartiene ? \*

Contrassegna solo un ovale.

Nessuna / sono a carico di terzi

Meno di 15.000 euro

tra i 15.000 e i 30.000 euro

tra i 30.000 e i 40.000 euro

tra i 40.000 e i 50.000 euro

più di 50.000 euro

Test valutativo

Secondo l'ultimo report dell' OCSE ( organizzazione per la cooperazione e lo sviluppo economico ) sul tema dell'alfabetizzazione finanziaria dei paesi del G20 esiste un forte gap tra uomo- donna riguardo a temi di natura economica. Con lo scopo valutare questo aspetto, in questa sezione, le sottoporro delle domande tecniche indicate dalla letteratura economico- finanziaria base.

8. Supponiamo di aver bisogno di prendere in prestito 100 \$ USA. Qual è l'importo più basso da rimborsare: 105 \$ o 100 \$ più il tre percento ? \*

Contrassegna solo un ovale.

105 \$

100 \$ più il tre percento

Non so rispondere

9. Supponiamo di aver messo dei soldi in banca per due anni e che la banca accetti di aggiungere il 15 % all'anno su quel conto. La banca aggiungerà più soldi al conto corrente nel secondo anno rispetto al primo o aggiungerà la stessa quantità di denaro in entrambi gli anni ? \*

Contrassegna solo un ovale.

Di più

Lo stesso

Non so rispondere

10. Supponiamo di avere 100 \$ USA in un conto corrente e che la banca ogni anno ci aggiunga il 10 %. Quanti soldi si avrebbero nel conto dopo cinque anni se non venisse prelevato del denaro ? \*

Contrassegna solo un ovale.

Oltre 150 \$

Esattamente 150 \$

Meno di 150 \$

Non so rispondere

11. Supponiamo che nei prossimi 10 anni i prezzi delle cose che acquistate abitualmente raddoppino. Se anche il reddito raddoppiasse si sarebbe in grado di acquistare meno di quello che si potrebbe comprare oggi, lo stesso o di più? \*

Contrassegna solo un ovale.

Di meno

Lo stesso

Di più

Non so rispondere

12. Supponiamo di avere dei soldi. Sarebbe più sicuro impiegare questo denaro in un solo investimento/ business o in più tipologie di investimenti/ business? \*

Contrassegna solo un ovale.

Un business/investimento

Più business/ investimenti

Non so rispondere



## Canali, media ed approfondimento

L'elaborato " Le sfide dell'educazione finanziaria " ( CONSOB 2017 ) dimostra la differenza dei sistemi di codifica e decodifica delle informazioni tra i due sessi e la necessità di utilizzare metodi di comunicazione adatti all'interlocutore. Questa sezione serve per individuare quali canali, metodologie e stili sono preferibili per la divulgazione di informazioni economico-finanziarie.

13. Riesce a reperire informazioni finanziarie di suo interesse ? \*  
Contrassegna solo un ovale.

Si, perché mi documento molto  
Si, anche se con qualche difficoltà  
No, perché lo trovo difficoltoso  
No, non le cerco mai

14. Quanto sfrutta i social media ( tra instagram, facebook, twitter, linkedin e youtube ) per leggere articoli ed informarsi su temi di natura economica? \*  
Contrassegna solo un ovale.

Molto sfruttati  
Abbastanza sfruttati  
Per niente sfruttati

15. Crede che l'attuale assetto informativo ( reti scolastiche, reti giornalistiche, social media e palinsesti televisivi ) offra una formazione finanziaria ed economica sufficiente? \*  
Contrassegna solo un ovale.

Si  
Solamente in parte  
No  
Non so

16. Mi indicherebbe, secondo la sua opinione, quali tra i seguenti metodi informativi, sono più attrattivi per la divulgazione e/o formazione di contenuti economici ( Può scegliere più di un opzione ) \*  
Seleziona tutte le voci applicabili.

Social media  
Programmi televisivi sul tema  
Eventi in luoghi fisici  
Giornali e/o libri

17. Crede che la divulgazione di informazioni economiche debba essere rinnovata ed aggiornata attraverso canali più "moderni" ( es. applicazioni e piattaforme digitali )? \*  
Contrassegna solo un ovale.

Si  
No  
Non so

18. Quanto, secondo lei, la tecnologia è importante ai fini del sistema economico-informativo? \*  
Contrassegna solo un ovale.

Molto importante  
Abbastanza importante  
Poco importante  
Per niente importante

19. Usufruisce delle piattaforme digitali esistenti per la gestione di acquisti, home Banking ed investimenti? \*  
Contrassegna solo un ovale.

Si  
No

20. Lei è a conoscenza di piattaforme web e/o applicazioni per l'educazione finanziaria rivolto principalmente alle donne? \*  
Contrassegna solo un ovale.

Si  
No  
Non so

21. Se dovesse venire a conoscenza di una piattaforma studiata appositamente al femminile per l'informazione finanziaria ne usufruirebbe? \*  
Contrassegna solo un ovale.

Si  
No  
Non so

22. In genere lei preferisce un tipo di informazione visuale ( grafici e figure ) oppure numerico-testuale? \*  
Contrassegna solo un ovale.

Visuale  
Numerico testuale  
Non so

23. Secondo lei lo stesso tipo di comunicazione delle informazioni è efficace allo stesso modo con persone di sesso maschile e femminile? \*  
Contrassegna solo un ovale.

Si  
No  
Non so



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