

**An Analysis: Financial Literacy amongst Women of Maltese
Nationality**

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A dissertation submitted in partial fulfilment of the requirements of the
Degree of Master of Arts in Banking, Investments and Finance Studies at the
University of Malta

October 2024



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Abstract

Financial literacy is a crucial skill which helps people make educated financial decisions, manage risks, plan for retirement, avoid scams and handle cost-of-living issues. This study focused on analysing the financial literacy of Maltese women aged 18 or over to investigate the extent to which the global trend of lower financial literacy among women applies to Malta. Through questionnaires, this study aimed to assess financial literacy and digital skills among Maltese women, examine the influence of socio-demographic factors, evaluate their financial well-being, and identify recurring challenges through retesting by comparing current findings with previous data. The questionnaire was created using the Organisation for Economic Co-operation and Development (OECD)'s toolkit which was an effort made to have a standardised way of measuring financial literacy. This study provided new updated data on the financial literacy of Maltese women by retesting previous questions as well as introduced new ones that have never been asked or investigated in Malta before, including questions on digital financial literacy, risk, inflation, and diversification. The findings suggest that although Maltese women's financial literacy skills surpass the OECD average, hence, appearing to have high financial literacy at a surface level, a significant gap persists, with only a limited percentage achieving perfect scores, indicating a need for greater focus on specific financial categories. Only a limited number achieved the minimum target score in digital financial literacy, highlighting deficiencies in digital practices such as cybersecurity awareness. Moreover, financial well-being scores were moderate, highlighting the necessity of financial education, especially in fostering long-term planning and resilience for future financial stability. Recognising these areas for development is essential, since financial literacy enables individuals to make educated financial decisions. Enhancing financial literacy not only increases individual financial health but also fosters greater economic stability.

Keywords: Financial Literacy, Maltese women, Financial Wellbeing, Socio-economic factors

Acknowledgements

I would like to express my sincere gratitude to my supervisor, Dr. Robert Suban (B.B.A. (Paris), M.A. (Bruges), Ph.D. (Alliance M.B.S.), A.C.C.A.) for his invaluable guidance, continuous support and patience along with insightful feedback throughout the writing of this thesis.

I am sincerely thankful for each and every person who participated in this study, as without their contribution, this study would not have been possible.

I also want to express my heartfelt gratitude towards to my closest friends, who have provided me with unwavering support, encouragement, and advice. Your faith in me and the joy you've given into my life have helped in keeping me motivated and focused. I feel really privileged to have you by my side.

A special thank you goes to my parents Mariella and Joe, and my sister, Justine, whose unwavering support in every possible way has shaped me into the person I am today. I am forever grateful and could not have come this far without your love, patience and support from the very beginning of my educational journey.

Lastly, I would like to extend my heartfelt appreciation to my boyfriend, Jake Degabriele, whose encouragement and motivation have consistently pushed me to strive for greater achievements.

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List of Abbreviations

ACR - Association for Consumer Rights

BOV – Bank of Valletta

EFTs – Exchange Traded Funds

EU – European Union

FL-ABK - Financial Literacy – Attitude, Behaviour, and Knowledge

FREC - Faculty Research Ethics Committee

HSBC - Hongkong and Shanghai Banking Corporation Limited

INFE - International Network on Financial Education

JA - Junior Achievement

MBA - Malta Bankers' Association

MBB - Malta Business Bureau

MFSA - Malta Financial Services Authority

NCW - National Council for Women

NSO - National Statistics Office

OECD - Organisation for Economic Co-operation and Development

UREC - University Research Ethics Committee

Chapter 1 – Introduction

1.1 Introduction

This chapter provides an outline of the dissertation, emphasising its objectives and the main questions it aims to address. Section 1.2 provides an overview on financial literacy and its importance. Section 1.3 focuses on the research question, whilst section 1.4 outlines the dissertation objectives. Section 1.5 delineates the expected contribution to the existing literature, emphasising the significance of this study in Malta. Lastly, section 1.6 provides an outline of the dissertation structure.

1.2 Background to the study

The financial literacy of a population is a crucial element of any economy. In the absence of money, when interactions were based on barter, individuals had no need to comprehend its function or acquire financial literacy. Even when money was introduced, financial decisions were straightforward, consisting of the decision to either keep cash at home or deposit it. The growing complexity and intricacy of financial products and technological advancements, offering a plethora of both traditional, non-traditional, and cross boarder investment opportunities, has made it increasingly important to have strong financial literacy to navigate and identify the best investment opportunities. Recently, there has been a rise in financial fraud, where financially illiterate people are more likely to be scammed (Zammit, 2023). The significance of financial literacy, understood as the ability to understand and in turn, effectively apply financial knowledge, expands accordingly (Batsaikhan and Demertzis, 2018, De Bassa Scheresberg, 2013).

Financial literacy is an important issue that needs to be tackled as many are struggling to pay their expenses due to the cost-of-living issue, necessitating fast action. Poor numeracy skills limit job growth, especially for women and low-income people, worsening Malta's inequality. An Insurance Europe Survey indicated that over a third of respondents are not saving for

retirement, and a quarter are not interested in doing so, indicating a financial readiness gap (ACR Malta, 2023).

Financial literacy is a combination of knowledge, behaviours, and attitudes that help people budget, establish goals, and choose financial products (OECD, 2023). Financial literacy helps people make smart money related decisions which ultimately benefit society as it helps consumers manage risks, handle cost-of-living problems, and make educated financial service decisions, improving personal money management and societal well-being. The importance of financial literacy as a 21st-century life skill has been acknowledged on a worldwide scale as it is critical for empowering people and advancing the financial well-being of both individuals and society (G20, 2021).

Monticone (2010) concluded that widespread financial illiteracy puts people's financial decisions at risk since the judgement made by people who lack expertise results in poor financial consequences. Financial literacy helps people manage savings, budgeting, and investing, improving financial results which ultimately leads to people preventing fraud, managing debt, planning for retirement, and enhancing their financial well-being. Financial decisions made without financial literacy affect society (Gerardi et al., 2010). Hence, financial literacy decreases bad financial decisions that lead to consequences on both the individual and society. Financial education empowers these populations, reducing inequality, supporting financial stability, and promoting inclusive growth. Financial inclusion may boost economic development and reduce inequality by providing financial services to disadvantaged communities.

Even in developed economies, financial illiteracy is widespread (Lusardi & Mitchell, 2011). Women, who score lower on financial literacy evaluations than males, require this information to ensure their financial futures due to rising life expectancies and the possibility of outliving one's assets. Financial literacy is crucial for managing economic life and actively engaging in financial institutions as financial decision-making gets more complicated, especially as governments

move retirement planning to people. Financial inclusion may boost economic development and reduce inequality by providing financial services to disadvantaged communities.

1.3 Research Question

“What is the level of financial literacy amongst Maltese women?”

The research question seeks to investigate Maltese women's understanding of financial knowledge, as well as their financial behaviours and attitudes. Numerous studies have indicated that women all over the globe typically have lower degrees of financial literacy than males, which can result in reduced economic empowerment and worse financial decisions. Thus, this population segment will be specifically targeted to obtain a more profound understanding and ascertain whether the findings in numerous studies, that is that women have lower financial literacy than men, are applicable to the Maltese population. The objective is to identify recurring challenges and opportunities for advancement by comparing this discrepancy with previous data. The financial literacy levels of Maltese women are explicitly examined in this research, which contributes to the existing literature and necessitates further analysis. Confronting these issues directly is necessary to address financial illiteracy, as this approach makes interventions more effective by focusing on the root causes. By adopting this focused approach, this research has the potential to narrow the gender gap, promoting greater financial inclusion.

1.4 Research Objectives

1. To measure the level of financial literacy amongst women in Malta
2. To compute digital financial literacy scores, assessing Maltese women's ability to use digital tools for managing personal finances.
3. To identify how socio-demographic factors including age, education level, income and employment status impact the financial literacy levels of Maltese women.
4. To evaluate the financial well-being of women in Malta.

5. To assess how retesting the results helps identify common themes and highlight the main areas where women struggle.

1.5 Contribution to the literature and Significance of the Study whilst addressing Literature Gaps

Financial literacy is relevant now more than ever, given the increase of products and investment opportunities, along with a greater need to plan for retirement. Every individual makes various long-term financial decisions, such as establishing a pension plan, managing personal finances, obtaining a mortgage, or investing a portion of their resources in financial assets. Despite this, research continually indicates that many individuals lack the necessary knowledge to make educated financial decisions (Allgood and Walstad, 2016). Consequently, some individuals encounter negative financial outcomes, often because they are unaware of other options or the consequences of their choices.

Despite the fact that research on financial literacy in Malta has already been done, where Malta actively participated in the 2018 and 2023 Organisation for Economic Co-operation and Development (OECD) and International Network on Financial Education (INFE) worldwide adult financial literacy surveys, the OECD themselves stress the importance of reassessments and re-testing of financial literacy to show trends, improvements, and opportunities for improvement. Therefore, this study enhances the literature by presenting fresh data on financial literacy among women in Malta. Women consistently score worse than males and consequently exhibit lower financial levels. Hence, it was decided to focus the research on women's financial literacy, specifically women of Maltese Nationality.

The Association for Consumer Rights (ACR) (2023) identified various financial literacy and inclusion requirements. A standard technique for assessing financial literacy and inclusion was recommended to provide uniformity and comparability across research and initiatives. The ACR

(2023) also stressed the need of financial inclusion efforts for young people, women, immigrants, and low-income individuals as these programs seek to close financial knowledge and access gaps, enabling these groups to engage more confidently in the financial system. This study addresses both these needs by utilising the OECD's standard methodology to assess financial literacy comprehensively and comparably. Additionally, it places a particular focus on women, examining their financial literacy and inclusion to better understand and address the confidence and knowledge gaps they face.

This research not only revisits, retests and builds upon the questions asked in the 2018 and 2023 OECD/INFE global financial literacy surveys conducted in Malta but also contributes new data. A significant addition is a section completely dedicated to digital financial literacy, addressing the evolving needs in today's financial landscape. Moreover, new questions throughout the questionnaire enhance the scope of the survey by incorporating additional financial knowledge insights, such as the concepts of risk and return, the definition of inflation, and the importance of risk diversification. The financial attitudes section has also been expanded to offer deeper insights into the respondents' financial viewpoints.

These additions remain fully in line with the OECD's Toolkit for measuring financial literacy, which provides a standardised framework for evaluating financial knowledge, attitudes, and behaviours. While the OECD/INFE questionnaire has been extensively utilised in other countries, this marks the first time Malta will assess these new aspects of financial literacy. The study is particularly significant as it adapts the internationally recognised OECD methodology to Malta's context, offering fresh insights and enabling Malta to benchmark its financial literacy levels against global standards and adjust its educational policies as necessary.

This particular part of the population will be targeted specifically to gain greater insights and see whether the hypothesis that women have lower levels of financial literacy holds within the Maltese population. Hence, by targeting this gap, and comparing it with past data, the aim is to

identify consistent challenges and areas for improvement. Therefore, this study enhances the current literature by explicitly analysing the financial literacy levels of Maltese women, an issue that requires greater exploration. Reducing financial illiteracy requires addressing these concerns head-on as doing so makes interventions more successful by concentrating on the underlying causes. In doing so, the gender gap could be reduced and encourage greater financial inclusion by taking this focused approach.

Atkinson and Messy (2012) emphasise that financial literacy is essential for enhancing financial well-being and inclusion by enabling individuals to manage their finances proficiently and prepare for the future. Financial literacy is important from both a societal perspective as well as an economic perspective. In fact, enhancing financial literacy among women will increase savings and investment, hence fostering overall economic growth and development in the nation. Despite considerable improvements in this area, substantial progress is still necessary, hence validating the necessity of this study.

All in all, this study enhances the literature by presenting new data on financial literacy among women in Malta as it essential to continue collecting and analysing evidence as repeated measures reveal whether improvements have been made and what more needs to be done. This research advances the subject by comparing gender financial literacy levels using new and old studies.

1.6 Dissertation Overview

Figure 1 presents an overview of the dissertation which essentially comprises of 5 chapters. Chapter 1 presents the research questions, objectives, and the reason why the study is being conducted. Chapter 2 gives a detailed review on the most crucial literature on financial literacy focusing on women and the local scenario. Chapter 3 outlines the research design methodology employed to achieve the study's aims and objectives. Chapter 4 presents the results of the questionnaire and provides a comprehensive discussion and analysis of the findings. Lastly,

Chapter 5 discusses the conclusions drawn from the study and provides corresponding recommendations and areas for future research.

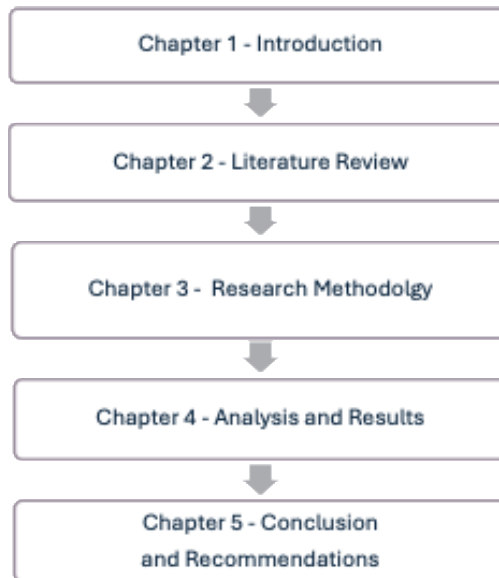


Figure 1 – Dissertation Overview

Chapter 2 – Literature Review

2.1 Introduction

This chapter reviews the most significant literature on financial literacy, with a special focus on women. In section 2.2, a definition of financial literacy is provided. Section 2.3 focuses on the three components of financial literacy (financial knowledge, financial behaviour, financial attitude) and financial education. Section 2.4 examines the persistent gender gap within financial literacy taking into account socio-economic characteristics and geographic differences. Section 2.5 focuses on financial literacy amongst women, highlighting aspects such as confidence, knowledge deficiencies, self-awareness, the seeking of professional guidance, and retirement issues. Section 2.6 analyses the measurement of financial literacy, including the Big Three Method, the OECD initiatives, and subjective and objective approaches to measurement. Section 2.7 discusses implications of financial illiteracy. Section 2.8 discusses findings across the EU whilst section 2.9 focuses on financial literacy in Malta and outlines the strategies to financially educate the Maltese.

2.2 Defining Financial Literacy

Despite rising research and importance, financial literacy is still interpreted differently by different writers (Hung et al., 2009). Huston (2010) states that financial literacy is comprised of two components; the comprehension of financial concepts or financial education, and the capacity to implement financial knowledge in the management of personal finances. Similarly, Savoia et al. (2007) defines financial literacy as the process of obtaining information and skills to make safer financial decisions and improve personal financial management. Lusardi (2008) claims that financial literacy comprises comprehending interest compounding, nominal vs real values, and risk diversification. Financial literacy is the set of skills and information that helps people make informed financial decisions. Financially literate people can make educated money management decisions including saving, investing, and risk management.

It could be seen that many publications define financial literacy differently, but most definitions contain the same elements. Most recently, the OECD (2024) defined financial literacy as “a combination of financial awareness, knowledge, skills, attitudes and behaviours necessary to make sound financial decisions and ultimately achieve individual financial well-being”. Thus, this definition highlights three important elements of financial literacy being financial knowledge, behaviour, and attitude.

2.3 The Three Components of Financial Literacy and Financial Education

Whilst often mistaken and used interchangeably with "financial education" or "financial knowledge", "financial literacy" is different. Financial literacy is the combination of financial knowledge, behaviour and attitude by applying skills and behaviours to financial decision-making. All of these are distinct terms and carry their own specific meaning.

2.3.1 Financial Knowledge

Financial knowledge entails understanding fundamental financial principles and utilising numerical skills in financial situations. Financial knowledge empowers individuals to oversee their money, evaluate financial products to make educated decisions, and react to events that may affect their financial stability (OECD, 2023). Financial knowledge is learnt throughout life and changed by personal experiences that affect income, spending, and savings (Delavande et al., 2008). People can't make excellent financial decisions without basic financial understanding. Financial knowledge aids borrowing, investing, and saving decisions as sophisticated financial products become more accessible. As financial knowledge grows, so does money management.

2.3.2 Financial Behaviour

Financial behaviour indicates the impact of individuals' behaviours on their financial situations and general wellbeing, both in the short and long term. Adverse behaviours such as postponing bill payments, neglecting to budget for future spending, or choosing financial goods without enough comparison can jeopardise an individual's financial wellbeing (OECD, 2023). Whilst knowledge is important, financial behaviour, i.e., how people manage their objectives, budgets, and finances, is crucial to financial literacy (OECD, 2013). Atkinson and Messy (2012) believe that positive financial literacy behaviours like cost budgeting and financial stability improve financial wellbeing, whereas negative behaviours like excessive credit card use might hurt it.

2.3.3 Financial Attitude

Financial attitude is recognising that although individuals may have the information and capability to act, their attitudes towards spending, saving and planning money can profoundly influence their financial decisions and behaviours (OECD, 2023).

2.3.4 Financial Education

Although not part of the financial literacy components, financial education goes hand in hand to ensure financial literacy. Financial education helps people grasp financial ideas and make smart financial decisions (OECD, 2005). Financial education is lifelong. Before making major financial decisions, people need financial education (Lusardi et al., 2010, Van Rooij et al, 2009).

Empowering people to make smart financial decisions and improve their financial wellbeing requires improving their financial knowledge and abilities. Recent advancements like digitalisation and sustainable products affect personal finances and emphasise the need for financial literacy to help people adapt (OECD, 2024).

People develop the confidence to make good financial decisions, identify dangers and opportunities, and improve their financial results with information, education, and unbiased advice. Financial education helps people manage portfolios, balance risk and security, and

invest in long-term assets, improving financial literacy and behaviour. Recent research by Fernandes et al. (2014), Hastings et al. (2013), and Stolper and Walter (2017) demonstrate that financial education programs have only moderately improved financial decision-making. This contradicts Kaiser et al. (2020), who claims these programs were effective. Thus, financial education programs must be assessed and updated to guarantee individuals learn financial skills. Financial literacy is important for women's decision-making and financial stability, as Stone, Wier, and Stephanie M. (2008) discovered that financial education decreases consumption. Lusardi (2013) adds, "You are your own CFO," emphasising that financial education allows people to manage their finances. Financial education helps people make better financial decisions, manage their resources, and seek assistance, resulting in financial stability. Lusardi et al. (2012) agree with Hubbard et al. (1995) that high-educated persons save more than low-educated ones. Education tends to lead to more careful investing choices and greater returns. Financial and investing literacy may help well-educated, high-income investors earn better returns (Lusardi et al., 2012).

Financial literacy initiatives that empower women are needed. Financial literacy is essential for women's financial independence, empowerment, and economic success, especially given childbearing and cultural norms that limit career and employment involvement (Dwivedi, Purohit and Mehta, 2015). Traditional gender norms such as staying at home and disrupted career pathways from motherhood resulted in women working less and hence having reduced financial knowledge, especially elderly women (Sevak, Weir, and Willis, 2004, Biro, 2011). However, research shows that increased education does not guarantee improved financial literacy. Mahdavi and Horton (2014) revealed that even well-educated, working young women from prestigious institutions struggle with financial literacy. Despite higher education, women, even university graduates, have low financial literacy (Bucher-Koenen et al., 2017, Potrich, Vieira and Kirch, 2018). Lusardi, Mitchell, and Curto (2010) revealed that female non-college graduates were 13% points less likely to answer financial literacy questions correctly than male

counterparts, despite the same level of education. College and secondary school pupils show similar disparities, indicating a worldwide trend across financial markets and cultures (Chen & Volpe, 2002, Goldsmith & Goldsmith, 1997, Ford & Kent, 2010).

Education is important, but financial literacy also requires real practice. Financial literacy is needed to make intelligent borrowing, saving, and investing decisions as sophisticated financial products become more accessible. Financial literacy impacts society's financial wellbeing beyond personal money management (Mandell, 2008) as financial literacy decreases debt, consumerism, and compulsive spending (Cakarnis and D'Alessandro, 2015). Women and low-income individuals need financial literacy to achieve financial stability and long-term economic wellbeing.

2.4 Persistent Gender Gap within Financial Literacy

Financial literacy is a complex concept that requires the ability to both comprehend as well as apply financial concepts to day-to-day scenarios. This concept encompasses critical components, including financial planning, saving, investing, budgeting, and money management (Arora, 2016).

Despite the lack of a standardised approach to measure financial literacy, a variety of methods have been applied throughout the years. Financial literacy has always been important for measuring educational outcomes and identifying barriers in financial decision-making, hence numerous methods have been tried to quantify it (D'Silva, D'Silva and Bhuptani, 2012).

Whenever studied, irrespective of the method used, a gender gap consistently emerges where women tend to possess lower levels of financial literacy than men (Agarwalla et al., 2015, Atkinson and Messy, 2012, Mottola, 2013, Potrich et al., 2015). Even after adjusting for sociodemographic, cultural and institutional characteristics, the financial literacy gap between men and women remains large and statistically significant, suggesting that financial education initiatives should target women (de Bassa Scheresberg, 2013).

Studies published around the world, including Agarwalla et al., 2015, Atkinson and Messy, 2012, Bucher-Koenen, Lusardi, Alessie, and Van Rooij, 2014, Mottola, 2013, OECD, 2013, consistently show that there is a gender difference in financial literacy, with women having lower levels of understanding than males. This pattern is visible in many different countries, indicating that the levels of financial literacy are similar. A person's level of financial literacy is influenced by a variety of circumstances, which have an impact on how they handle routine financial transactions and issues. Existing research reveals how a person's financial literacy skills are greatly influenced by their demographics and social background. Numerous studies have shown that financial literacy is generally low, but it is especially low among women, minorities, the less educated, and those with lower incomes (Agarwalla et al., 2015, Arora, 2016, Atkinson and Messy, 2012, Bucher-Koenen et al., 2017, Chen and Volpe, 1998, Lusardi and Mitchell, 2008, 2011). These groups have more difficulty grasping basic financial concepts and making financial calculations, which makes it more difficult for them to make wise financial decisions (Agarwalla et al., 2015, Atkinson and Messy, 2012, Bucher-Koenen et al., 2017, Mottola, 2013, Sekita, 2011).

2.4.1 How does Financial Literacy vary by Ageing?

In both developed and developing countries, women show less financial literacy than males, even after controlling for age, education, and income (Klapper, Lusardi and Van Oudheusden, 2015). According to Agarwal et al. (2009), Lusardi and Mitchell (2011), Mottola (2013), and Klapper, Lusardi and Van Oudheusden (2015), the "hump-shaped", or "reverse U-shape" pattern link between age and financial knowledge is a regular pattern observed in studies where financial literacy essentially rises with age in most developed countries, reaching a peak in middle age and then falling in later life. However, in developing economies, it is the young adults who are most financially literate. Lusardi, Mitchell, and Curto (2014) studied how women typically perform lower in financial computations and have poorer understanding of intricate financial concepts compared to men. According to Woodyard and Rabb's (2012) analysis of

respondents' answers to five important financial literacy questions, there are gender differences in objective financial knowledge that are statistically significant, especially for younger and older people.

2.4.2 How does Financial Literacy vary by Socio-Economic Factors?

Other important factors to consider are education, income, and marital status. Higher income and educated individuals, as well as single parents, especially divorced women, tend to perform better than women without children. Married women often depend on their spouses for money management, hence their financial independence is heavily influenced by their marital status. Conversely, Bucher-Koenen et al. (2017), Calamato (2010), and Dew (2008), state how single people are more likely than married people to lack financial literacy. Low financial literacy increases the likelihood of making bad financial decisions, which over time can strain relationships and result in debt (Bucher-Koenen et al., 2016). This could be the reason why married individuals frequently exhibit greater levels of financial literacy. Despite these demographic effects, financial literacy tests show that women consistently perform worse than males in all age groups and demographic categories.

2.4.3 Geographic Differences in Financial Literacy

Age, education, and gender all have an impact on financial literacy, but a deeper comprehension of each country's distinct economic history, financial market development, and social structures is necessary to explain geographic variations in financial literacy. For instance, people are more likely to understand financial concepts when they experience them first hand. Example people in countries who have experienced high inflation are more informed about it (Batsaikhan and Demertzis, 2018, Bruine et al, 2010, Klapper, Lusardi and Van Oudheusden, 2015). This is evident in countries that have encountered hyperinflation such as Argentina, Peru, Georgia and Bosnia Herzegovina where the inflation comprehension rate exceeds the global average, but its overall financial literacy rate is lower than the norm (Klapper, Lusardi and

Van Oudheusden, 2015). Similarly, people in highly developed financial markets are more aware of the risks associated with investing. Overall, these results imply that a variety of demographic, economic, and experience factors influence financial literacy, particularly among women.

2.5 Financial Literacy within Women

It is inspiring to see that nowadays, women have achieved equal treatment with males. Regardless of all the progress made in gender equality amongst many fields, unfortunately, there is still a substantial gender disparity in financial decision-making. Globally, there is a four-point disparity in financial literacy between men and women (N26, 2024). Individuals must make financial decisions on credit cards, student loans, and retirement. Nonetheless, women sometimes lack the skills men employ to overcome these challenges. This suggests that a substantial number of women are making crucial financial decisions despite lacking sufficient financial literacy which is worrisome. Traditionally, males have typically made financial decisions (Fonseca et al., 2012, Hsu, 2016;), which may explain the gender gap in financial literacy.

Women often excel at budgeting and home management, but due to a lack of knowledge and understanding they rely on their husbands for critical financial decisions (Dwivedi, Purohit and Mehta, 2015). Many women lack confidence in this sector and are afraid of looking incompetent which hinders their ability to learn and improve. Financial literacy is essential as it helps women make smart savings and investment decisions and provide family financial security.

Many research and testing techniques show gender differences in financial literacy. Hogarth & Hilgert (2002) revealed gender disparities in financial literacy across industries, whereas Lusardi and Tufano (2015) and Van Oijen & Van Rooij (2016) identified significant debt literacy inequalities. Hung, Parker, and Yoong (2009) highlighted that gender differences persist over time and across measuring methods, and Agnew et al. (2008) noted discrepancies among subgroups.

Martha Klatt (2009) called for additional financial management courses and seminars for women due to a lack of tools and uncomfortable asking for guidance. Researchers found that women worry more about their financial future yet know less about how to safeguard it and experience more problems when making financial decisions than males (Anthes & Most, 2000). Women have different investing and money management attitudes (Hira & Loibl, 2007). Women contribute financially to their homes, but they are more likely to rely on male family members for financial decisions and less likely to seek financial education or invest (Lusardi & Mitchell, 2008). Income gaps, reduced financial exposure, domestic obligations, and time constraints contribute to this. Hung et al. (2012) found that women had less financial knowledge and confidence than males, emphasising the global need to educate women about finance. These findings emphasise the need for targeted financial education to narrow the gender gap in financial literacy and empower women.

2.5.1 Lower Knowledge and Lower Confidence among Women

Numerous studies have documented how women not only have lower financial literacy, but also lack confidence. Women are less likely to answer financial questions correctly and more likely to respond with "I don't know" (Bucher-Koenen et al., 2017, De Bassa Scheresberg, 2013, Lusardi and Mitchell, 2011, Klapper, Lusardi and Van Oudheusden, 2015). Additionally, women rate themselves lower than men in terms of self-assessed financial literacy. Hence, it is evident that women recognise that they lack knowledge and confidence in this area (Barber and Odean, 2001, Beyer, 1990, Chen and Volpe, 2002, Dahlbom et al., 2011). Papers by Webster and Ellis (1996) and Bucher-Koenen, Lusardi, Alessie, and Van Rooij (2014) provide evidence how even women who rate themselves as knowledgeable often hesitate when answering, further highlighting this confidence gap. Bucher-Koenen et al. (2016) investigates whether respondents who answer "I don't know" to financial literacy questions do so because they genuinely lack knowledge or because they lack confidence. Two surveys were conducted where the first allowed the "I don't know" option, whilst the second, administrated six weeks later, removed this

option. The first survey measured both knowledge and confidence, while the second focused solely on knowledge. The results showed that although women tend to know less than men, they know more than they believe, highlighting a gap between actual and perceived knowledge. While the gender gap narrows when removing the "I don't know" option, it persists, indicating that the gap is due to both lower knowledge and confidence.

2.5.2 Self-Awareness and seeking of Professional Advice

Given that many women recognise their financial illiteracy indicates that there is self-awareness which makes women great targets for financial education programs, which work well for women. Clark et al. (2006) discovered that retirement and savings seminars changed women's behaviour more than men's. Lusardi, Keller, and Keller (2009) showed that women's financial education programmes work. Klapper, Lusardi and Van Oudheusden (2015) found that just one-third of persons globally have basic financial literacy, confirming these worries. Women, low-educated people, and those in poverty in industrialised and developing nations are most affected by this issue. Many financial literacy studies have found that women lack financial decision-making abilities. Annamaria Lusardi (2006) observed that many women seek retirement planning and saving advice from family, friends, or financial experts.

Professional financial advice can fill knowledge gaps, but women are less likely to seek it or use online financial resources (D'Silva, D'Silva and Bhuptani, 2012, Loibl & Hira, 2006; 2011). Interestingly, people with better financial literacy seek expert help, while those with lesser literacy rely on peers and family. People with limited financial literacy are less inclined to talk about money. Women may be hesitant to engage professional advisers due to their weaker financial literacy and difficulty assessing advice quality. Mullainathan, Noth, and Schoar (2012) showed that young female investors got poorer financial advice than male investors, supporting Bucher-Koenen and Koenen (2015). Financial literacy and professional assistance should be

complimentary (Bucher-Koenen & Koenen, 2015, Collins, 2012, Hackethal, Haliassos, & Jappelli, 2012, Tennyson, 2011).

2.5.3 Increase in Life Expectancy and Retirement concerns among Women

According to Lusardi and Mitchell (2011), just 22.5% of U.S. women could correctly answer inflation, interest, and risk diversification questions, compared to 38.3% of males. This global trend is constant across various studies, raising concerns because women commonly outlive men and become widows, making financial decision-making abilities vital for their security (Lusardi & Mitchell, 2008; Bucher-Koenen et al., 2017).

Financial literacy improves financial wellbeing and social welfare, according to research.

Financial literacy is linked to a variety of financial behaviours, including retirement planning and asset accumulation (Lusardi & Mitchell, Stango & Zinman, 2009, Van Rooij et al., 2012).

Research shows that financially literate people buy stocks, control costs, borrow at reduced rates, and prepare for retirement. Therefore, women require financial preparation to ensure their future since they live longer and are more likely to be widowed or separated. Despite this, widowed or divorced women are more prone to give inaccurate responses or reveal financial uncertainties. Financial literacy empowers people to manage their finances without relying on government assistance, especially in retirement. Many women are uninformed of fundamental financial ideas, even though financial planning, emergency savings, and retirement preparedness can prevent post-widowhood poverty (Sevak, Weir, and Willis, 2004). Due to their tendency to marry older men and outlast them, women require financial knowledge and retirement preparation. Lack of financial awareness and difficulty getting good guidance puts women at risk of bad financial decisions and retirement planning. In fact, women have reported terrible poverty after the loss of their husband. These scenarios may have been avoided with financial preparation and contingency plans. Some women know about these financial instruments, but they're afraid to utilise them owing to insufficient information or confidence.

Retirement planning and financial knowledge go together. Financially literate people are more likely to save, diversify, and prepare for retirement. Financial literacy improves stock investing and financial management, resulting in higher financial stability in retirement (Bucher-Koenen & Lusardi, 2011, Lusardi & Mitchell, 2008, 2011, Van Rooij, Lusardi & Alessie, 2012).

Lusardi and Mitchell (2008) found that older women are financially illiterate and rarely plan for retirement. As populations age, especially in the EU, where one in three will be over 65 by 2050, public pension systems will be under strain. The Maltese government raised the retirement age to 65, connecting future increases to life expectancy. Consequently, in the last few years, private retirement savings have increased as state responsibility for financial wellbeing has shifted to individuals, meaning that individuals must manage their retirement resources (Klapper, Lusardi and Van Oudheusden, 2015). Financial literacy is important since people need to make educated savings, spending, and investment decisions to ensure their financial destiny (European Commission, 2015). Financial literacy improves retirement financial security by increasing savings, asset accumulation, and investment choices. Despite this, many young people lack long-term financial planning skills and are unprepared for financial shocks, stressing the need for precautionary reserves (de Bassa Scheresberg, 2013). Retirement planning is essential for financial stability in old life, as planners earn more than non-planners (Lusardi, 1999). However, empirical research across nations shows that many people, especially women, struggle to grasp savings and investing ideas, which hinders their retirement wealth accumulation (Lusardi & Mitchell, 2014). Women are less likely to plan for retirement than males (Lusardi & Mitchell, 2008) making them more financially insecure.

2.6 Measuring Financial Literacy

Financial literacy is complex, making it difficult to define and measure, and the literature emphasises this. No commonly acknowledged model for evaluating financial literacy exists, underlining the necessity for models that analyse several variables and their interrelations.

Financial literacy assessment is difficult and people have a hard time digesting financial information and making decisions based on the financial information (Lusardi and Mitchell, 2011). Schmeiser and Seligman (2013) also claim that financial literacy questions have not been rigorously tested. Huston (2010) also stresses the lack of a financial literacy measurement tool.

Different surveys utilise different techniques and questions, indicating no consensus on the best approach to measure financial literacy. Multiple-choice questions, true or false, knowledge examinations, and calculations were utilised in different studies. The study "Defining and Measuring Financial Literacy" by Hung, Parker, and Yoong (2009) found that all four studies reached similar conclusions, indicating consistency in results across different measures. This suggests that the researcher's measuring approach does not impact the results.

Several scholars have created methods to test financial literacy, evaluating how people comprehend and handle money. In the Netherlands, Van Rooij et al. (2011) examined financial literacy and retirement planning, while Chen and Volpe (1998) and Johnson (2001) developed financial behaviour assessment instruments. Shockey (2002) developed the Financial Literacy – Attitude, Behaviour, and Knowledge (FL-ABK) tool to assess financial attitudes and behaviours.

2.6.1 The Big Three Method

A widely used and replicated method was created by Lusardi and Mitchell (2006) through the U.S. Health and Retirement Study, and then, in 2011 through the paper 'Financial literacy around the world: an overview'. Hence, some sense of consistency in the way financial literacy is measured was always viewed as important, as since then, those questions have been employed to countless studies to assess financial literacy worldwide. In a point turning study, Lusardi and Mitchell (2006, 2011) essentially created a method that assesses financial decision-making knowledge. The standardised questions allow cross-country comparisons of financial knowledge across institutional, cultural, social, and economic settings whilst helping identify

demographic groups with inadequate financial literacy (Arrondel et al., 2020, Batsaikhan and Demertzis, 2018, Bucher-Koenen et al., 2017). Lusardi and Mitchell's financial literacy test comprises three basic questions, usually referred as the "Big Three" to measure financial knowledge. These enquiries were centred on the calculation of compound interest, the assessment of the real rate of return after inflation, and the assessment of the risks associated with various asset classes. This method facilitated the assessment of individuals' comprehension of fundamental financial concepts, which are critical for the making of well-informed financial decisions. These questions are useful, however, they only measure theoretical knowledge and not real financial behaviours (Bucher-Koenen et al., 2017). A copy of the Big Three questions is found in Appendix A.

2.6.2 The OECD Toolkit

Recently, the OECD and the INFE developed a comprehensive financial literacy assessment tool that measures attitudes, behaviours, and knowledge in response to worldwide need for standardised examinations.

2.6.3 Subjective and Objective approaches to Measurement

According to research on young American people, subjective and objective financial literacy judgements differ, which greatly impacts financial decision-making (Bucher-Koenen et al., 2017, De Bassa Scheresberg, 2013). According to Lusardi and Mitchell (2011), subjective assessments ask people to rate their financial knowledge on scales or how much they agree to statements, while objective assessments ask questions about numeracy, interest rate calculations, inflation, risk diversification, and investment principles. Many people think they're financially literate but do badly on objective tests. Men outscore women in subjective and objective ratings. These findings highlight the need to address financial knowledge and expertise to enhance financial decision-making.

2.7 Implications of Financial Illiteracy

Financial illiteracy may lead to expensive mistakes. Lusardi and Tufano (2015) found that those who don't understand interest compounding are more likely to borrow, pay higher interest rates, and pay large transaction costs. Limited financial awareness leads to increased borrowing and less saving (Stango and Zinman, 2009). Financial illiterate people are less likely to invest in the stock market (Kimball and Shumway, 2010, Van Rooij et al., 2011, Yoong, 2011), pay higher interest rates and fees on debt (Lusardi and Tufano, 2015), and use high-cost borrowing techniques (De Bassa Scheresberg, 2013). Financial illiteracy has serious repercussions, but financial literacy has similar rewards. De Bassa Scheresberg's (2013) study found that financial literacy enhances retirement savings and minimises expensive borrowing. More financially literate individuals paid lower fees for mutual funds (Hastings et al, 2011). Financially savvy people save more for retirement and diversify their investments (Behrman et al., 2012, Lusardi & Mitchell, 2014). More financially knowledgeable employees could expect to earn higher returns on their investment savings (Clark et al., 2015). Schmeiser and Seligman (2013) and Lusardi and Mitchell (2011) show that financial literacy improves saving, borrowing, retirement planning, and asset diversification. Thus, leading to long-term financial success which benefits individuals and nations since financially knowledgeable people make better financial decisions. This shows how important financial knowledge is for long-term financial health.

Financial literacy improves budgeting, saving, expenditure control, debt management, and wealth growth, according to empirical data. Financial illiteracy, especially among women, hinders asset management and development, possibly threatening their financial security (Campbell, 2006, Moore, 2003, Stango and Zinman, 2009).

2.8 Findings across the European Union (EU)

Results across the EU parallel other developed economies, revealing that lower-income persons, women, youth, and those with less education score badly on financial literacy examinations. Financial literacy percentages vary throughout EU member states, but it is averaged at 52% across EU individuals. Malta's Financial Literacy stood at 44%, which is below average. Financial literacy affects financial behaviour (Lusardi and Mitchell, 2014), so it's important to assess financial knowledge, especially among vulnerable groups like women and the poor (Klapper, Lusardi and Van Oudheusden, 2015). Mortgage debt accounts for a large share of euro area household debt, making financial literacy essential for young households, first-time homeowners, and low-income households. Debt consequences must be understood to make educated financial decisions in these populations. Financial literacy is also adversely related with poverty, inequality, social exclusion, and social immobility, suggesting it might aid the EU's inclusive growth objective by enabling people benefit from economic progress. These findings emphasise the necessity of targeted financial education for financial well-being and economic inclusion (Batsaikhan and Demertzis, 2018).

2.9 Financial Literacy in Malta

In 2015, Klapper, Lusardi and Van Oudheusden measured financial literacy across 148 countries, including Malta. The results revealed that women generally possess lower levels of financial literacy than men, with women often answering questions with the "I don't know" phenomenon, which is consistent with results found in different countries in different studies. Malta's financial literacy stood at 44%, compared to 52% average in the EU. Other member states who joined the EU in 2004 were found to also have inferior financial literacy (Klapper, Lusardi and Van Oudheusden, 2015).

The latest published Eurobarometer 2023 survey reveals that 20% of the Maltese population exhibited a high level of financial literacy, 67% a medium level, and 13% a low level.

Additionally, 21% of Maltese respondents rated their overall knowledge of financial matters as very high or quite high when compared to their peers. Concern was raised when the Maltese were asked how long they could cover their living expenses without borrowing money or relocating if they lost their primary source of income, with 35% of Maltese respondents reported that they could sustain themselves for six months or more. This is quite worrisome as it highlights the existence of a significant portion of the population that could be considered financially vulnerable. When it comes to the level of confidence that individuals have in their ability to maintain a comfortable standard of living throughout their retirement years, which is another measure of financial literacy, the results were nearly of an even split. This is because 47% of respondents indicated that they are very confident or quite confident, while 48% expressed little or no confidence in their financial preparedness for retirement. It was found that Malta's situation is similar to the EU average, however individual nations may differ. The results essentially highlighted the need for focused financial education, especially for women, younger individuals, and those with lower incomes or lower levels of general education, as these groups typically demonstrate lower financial literacy compared to other demographics (Zammit, 2023).

2.9.1 Strategies to financially Educate the Maltese

The growing need for improved financial education in Malta has become increasingly apparent, resulting in the implementation of numerous initiatives. Malta Daily and Bank of Valletta (BOV) partnered together where three-minute social media videos are created to explain key financial concepts including pension plans, debit vs credit cards, Exchange-Traded Funds (ETFs), effective investment strategies, compounding, and financial scams like phishing and identity theft (Malta Daily, 2023, 2024).

In 2017, the Ministry for Social Policy and Children's Rights launched the 'Ġemma – Know, Plan, Act' program to enhance financial literacy in Malta by providing practical information for daily life. Ġemma offers many educational tools, including eBooks, video lessons, articles, and

information on investing, debt management, and budgeting. Also available are budgeting apps, retirement calculators, and information on Malta's pension and social security systems. Gemma provides workshops and webinars to encourage financial education and resources for children of all ages (Fenech, 2023).

The Malta Financial Services Authority (MFSA) is committed to improving financial literacy as part of its consumer protection strategy, helping individuals make educated decisions and avoid misleading entities. Financial education is promoted by the MFSA's internal and external committees that devise strategies and work with stakeholders. Its efforts include public engagement through events like the Public Services Expo and educational campaigns against greenwashing (MFSA, 2024).

Malta promotes financial literacy among students and educators through several initiatives including by participating in Global/European Money Week (Global Money Week, 2024). Webinars such as "Be Wise, Pay Smart" and "Be Money Smart!" integrate financial literacy into school curricula and teach budgeting, saving, and responsible money management (Malta Bankers' Association, 2024). Junior Achievement (JA) Malta and the Hongkong and Shanghai Banking Corporation Limited (HSBC) Malta Foundation held quizzes and expert advising sessions in 2024 to improve students' and the public's financial abilities. JA Malta launched a financial literacy podcast and an educator Learning & Development course on financial decision-making (JAYE Malta, 2024). These initiatives reflect Malta's commitment to fostering financial literacy from an early age (Times of Malta, 2023).

In 2019, the Malta Business Bureau (MBB) and HSBC Malta Foundation launched the INVEST+ project, offering workshops and an online mini-series to educate the public on key financial concepts, such as the difference between stocks and bonds and savings plans. The aim is to provide individuals with the financial knowledge necessary for personal and professional freedom (HSBC Malta, 2024). The importance of digital financial education in making informed

decisions, reducing pressure on pension systems, and fostering sustainable economic growth was highlighted (Malta Business Bureau, 2019).

Additionally, the University of Malta offers a study unit on financial literacy, equipping students with the skills to make sound financial decisions. The course covers financial planning, savings, investing strategies, debt management, and retirement planning, aiming to improve personal and family financial well-being (University of Malta, 2024).

The need for financial literacy among women is a well-recognised issue, and efforts have been made in Malta to address it and improve it. In 2023, the Central Bank of Malta, the Malta Bankers' Association (MBA), and the National Council for Women (NCW) held the "Women and Finance" conference during European Money Week to improve women's financial literacy. The program discussed online banking benefits, entrepreneurship, and women in business and stressed financial independence to boost women's finance confidence (Central Bank of Malta, 2023). Speakers highlighted the need for gender equality in family and institutional financial decision-making to create a more inclusive financial environment (Fenech, 2023).

Despite women being a demographic with lower levels of financial literacy, the issue is often disregarded and overlooked. Most financial literacy projects and efforts in Malta target children to integrate financial education into the school curriculum. Younger generations have inadequate financial literacy, making this critical. However, a significant gap remains in financial literacy among women and action needs to be taken.

2.10 Conclusion

Previous studies on financial literacy, both globally and locally, have revealed a significant gap in financial literacy among women, leading to long-term consequences in personal finance management. The issue of low financial literacy among women remains largely overlooked and without targeted efforts to address this demographic gap.

Chapter 3 – Research Methodology

3.1 Introduction

This chapter outlines the research design methodology employed to achieve the study's aims and objectives. Section 3.2 presents the preliminary research. Section 3.3 examines the data sources. Section 3.4 addresses ethical considerations, whereas Section 3.5 provides a detailed discussion on sample size. Section 3.6 outlines the data collection process, while Section 3.7 discusses the questionnaire format. Section 3.8 outlines the data analysis methodology, while Section 3.9 addresses the limitations faced throughout the study.

3.2 Preliminary Research

The OECD Recommendation on Financial Literacy emphasises the need for accurate, internationally comparable data to build successful national financial literacy strategies and activities to measure adult financial literacy (OECD, 2020). Financial literacy gaps are identified by this data. Reassessments of financial literacy show trends, improvements, and opportunities for improvement, which justifies and serves as the rationale for conducting this study. In this research, the gender gap and women's particular obstacles are examined. The main goal is to enhance financial literacy, reduce inequities, and empower disadvantaged communities to make educated financial decisions, thereby boosting financial well-being.

Given that there is no standard procedure on how to measure financial literacy, and the growing need for comparability across countries, the OECD along with INFE developed a toolkit in 2009 to allow for comparison of data between countries. The toolkit was refined and improved over the years, ultimately receiving approval from the G20 leaders. The toolkit provides methodological guidance to ensure systematic data collection and analysis, which assesses financial literacy, inclusivity, resilience, and well-being, whilst measuring both subjective and objective financial literacy (OECD, 2022). The OECD recommends this questionnaire for accurate and comparable data. Malta actively participated in the 2018 and 2023 OECD/INFE worldwide adult financial literacy surveys.

3.3 Primary Data

Primary data was collected through a semi-structured questionnaire distributed to women of Maltese nationality who are 18 years of age or older. A detailed questionnaire was developed to analyse financial literacy gaps, utilising the OECD survey framework, with certain questions customised to the Malta's context to provide relevance and significance. The questionnaire comprised of both open-ended and close-ended questions aimed at evaluating the financial literacy levels of participants, providing a thorough insight into women's financial knowledge, attitudes, and behaviours. A copy of the finalised version of the questionnaire is provided in Appendix B.

3.4 Data Collection

3.4.1 Data Collection Methodology Chosen

Due to the lack of a standardised approach for measuring financial literacy, and the growing necessity for comparability across countries, the OECD, in partnership with the INFE, developed a robust toolkit. Essentially, the toolkit intends to establish an international framework, and hence, a uniform methodology for measuring financial literacy.

In view of this, the survey used in this thesis was based on the latest published toolkit. To ensure that the findings could be compared, the questions were kept the same as possible. Despite this, the 2022 toolkit questionnaire version was considered excessively lengthy, prompting concerns including that respondents might be less willing to participate due to the time commitment required, thus resulting in lower response rates. Additionally, a long questionnaire could potentially lead some participants to provide inaccurate or rushed answers, simply to complete the survey quickly, rather than offering genuine responses. Therefore, it was opted to use the questions used in the 2023 international survey of adult financial literacy, which

were listed in Annex C of the same report, to prevent fatigue and maintain the respondent's interest and focus.

3.4.2 Administration of the Questionnaire

No pilot study was conducted prior to publishing the questionnaire online since it was based on questions already used and tested by the OECD.

The questionnaire took around 15 minutes to complete, and it was distributed online via social media platforms, including email, LinkedIn, and Facebook. Data collection began in September 2024 and lasted approximately a month.

Since this research centres on Malta, the questionnaire aimed to gather insights specific to Maltese society. The survey could be answered by any woman of Maltese nationality who is 18 years or older, to adequately represent the country's adult population. The age limit of 18 was set to specifically evaluate financial literacy amongst adults rather than financial literacy amongst young adults, which is a whole different segment of the population which should be studied and evaluated on its own.

3.5 Sample Size

A non-probability purposive sample, essentially meaning that participants were intentionally chosen based on possessing specific attributes and features that are relevant to this research study, was deemed best adequate for the purpose of this study (Bryman, p.418). Hence, in this case, participants were chosen based on their gender since being a woman is the focus of the study. Whilst this study will investigate the correlation between financial literacy and certain demographics such as age, income, employment status, and education level, these factors are not the main focus. The fundamental objective is to measure financial literacy amongst women, irrespective of these demographics.

Hence, probability sampling, where every individual in the population has an equal chance of being selected, purposive sampling involves the researcher using judgment to identify and choose individuals who fit particular criteria (Bryman, p.418). This approach ensures that the sample is composed of individuals who are most likely to provide meaningful insights to the research topic.

A representative sample may be extracted from the population of Maltese women residing in Malta. According to the latest published census by the National Statistics Office (NSO), the total amount of females of 18 years or older in Malta was of 210,646 (NSO, 2023). Therefore, by utilising this number and assuming the population is normally distributed with a standard deviation of 0.5, a margin of error of 5%, and a 95% confidence interval, the required sample size was estimated using the formula (Saunders, Lewis, and Thornhill, 2016, p.704).

$$n = p\% \times q\% \times \left(\frac{z}{e\%}\right)^2$$

Where;

n is the minimum sample size required

p% is the percentage belonging to the specified category

q% is the percentage not belonging to the specified category

z is the z-value corresponding to the level of confidence required

e% is the margin of error required

Hence, substituting, and only taking into consideration the total female population since the males are irrelevant to this study, the formula used for the calculation of the sample size is as followed

$$n = \frac{\text{eligible female population}}{\text{total female population}} \times \frac{\text{non - eligible female population}}{\text{total female population}} \times \left(\frac{1.96}{0.05}\right)^2$$

$$n = \frac{210646}{249541} \times \frac{38895}{249541} \times \left(\frac{1.96}{0.05}\right)^2$$

$$n = 202.18$$

Therefore, the representative sample of females in Malta who are 18 years old or older, with a 95% confidence interval and a margin of error of 5%, the sample size of 203 Maltese females is required. The final sample size of responses received was that of 213 Maltese females, making this study representative.

3.6 Survey Design

The study's design, which was based and derived from the OECD survey, measured financial literacy through a multidimensional approach, encompassing three primary parameters; financial knowledge, financial behaviour, and financial attitude. The questionnaire adhered to OECD standards, incorporating minor adjustments to align with the Maltese context.

The questionnaire was divided into ten sections, with 54 questions in all. The first section addressed consent to participate and confirmation of the individual's gender as female. The subsequent sections examined financial knowledge, financial attitude, financial behaviour, digital financial literacy, financial wellbeing, awareness of financial products, awareness of fraud and scams, and demographic information, respectively. A complete list of the questionnaire's questions is found in Appendix B. The survey offers useful insights on various aspects of financial literacy as it includes questions to measure people's financial awareness, the capacity to manage their money and consequently the ability to meet their financial commitments, the ability to plan for the future, and to make intelligent financial product selections. Beyond financial literacy, the questionnaire collects data on linked outcomes where financial literacy

may affect their financial wellbeing and resilience. Financial resilience is assessed by asking respondents about their ability to handle income and spending shocks and financial responsibilities. Additionally, the questionnaire captures a comprehensive set of socio-demographic data including gender, age groups income, employment and education levels to enable a more sophisticated analysis of replies and measure financial literacy across demographic groups

The OECD (2022) recommends that the questionnaire should be administered over telephone or in person. Despite this, an online questionnaire was determined to be the most suitable method for this study. Online surveys were chosen for their various benefits, including the ability to reach a larger amount of people, leading to gaining greater insights (Nayak and Narayan, 2019). Furthermore, as the questionnaires are completely anonymous and untraceable to individual respondents, participants may feel more at ease providing honest answers without the fear of judgement for answering wrongly, hence encouraging greater involvement from individuals with lower literacy levels in the study. Additionally, the latest OECD survey (2023) also unveiled that 97.8% of Maltese respondents have internet access, guaranteeing a wide reach and high participation rate for the study. Moreover, an online survey was utilised, as individuals who are frequently at home, such as the elderly, homemakers, the unemployed and students, are more likely to participate during phone or face-to-face methods. Hence, this results in biased outcomes due to the lack of genuine random selection as it focuses on a specific demographic. Thus, it may indicate that financial literacy is lower than it is, as these subgroups are identified in research as having poorer financial literacy levels.

Moreover, studies have found how financial literacy gender inequality persists across survey forms. The gap exists whether administered via phone in the United States, online in the Netherlands, or by pen and paper in Germany (Bucher-Koenen, Lusardi, Alessie, & Van Rooij, 2017). This discrepancy is also evident when a wider range of questions is used to assess both

basic and complex financial concepts (Bucher-Koenen, 2011, Lusardi & Mitchell, 2009, Van Rooij, Lusardi & Alessie, 2011).

Efforts were made to ensure that the survey questionnaire was user-friendly without any technical impediments and that the layout was compatible across different devices, whether accessed through a phone, a laptop or a tablet. A progress bar was implemented to notify respondents of their progress through the questionnaire, thereby motivating them to complete it by indicating the remaining amount.

3.7 Data Analysis

The semi-structured questionnaire responses were analysed utilising Microsoft Excel. This method facilitated the extraction of significant insights from the data, establishing a robust foundation for the study.

In this study, the total financial literacy score is the sum of financial knowledge (7 points), financial behaviour (7 points), and financial attitudes (4 points). For standardised comparability, the raw score is rescaled from 0 to 100. A point is given for every correctly answered question. The questionnaire required all questions to be answered, hence eliminating the "don't know" or "prefer not to answer" answers. For 1 to 5 scale questions, where 1 represents "completely agree" and 5 indicates "completely disagree," the score is computed by adding the replies and dividing by the total number of questions.

3.8 Ethical Considerations

Prior to the initiation of data collection, an application was submitted to the Faculty Research Ethics Committee (FREC) and the University Research Ethics Committee (UREC) of the University of Malta where this dissertation is being presented as part of the degree. Once the UREC gave approval, the data collection began. Additionally, participation was entirely voluntary, and respondents could opt out of the study at any time. The participants were not

asked to disclose any personal information. This method ensured the confidentiality and anonymity of all participants during the study. Additionally, access to the raw data will be restricted solely to the researcher and after the data is analysed and no longer needed, the data will be securely deleted. Furthermore, participants are clearly informed about the storage and management of their data as well as the dissemination and presentation of this data, in aggregate form, in the results section in order to ensure anonymity.

3.9 Limitations

A strong limitation is the challenge in verifying if the questions were genuinely answered by the intended respondents. Despite that the survey questions were specifically targeted at women, and participants were required to confirm their gender as female, there exists a possibility that some men may have inaccurately completed the questionnaire. Furthermore, people who are not of Maltese nationality may have also participated in the study. These factors create possible sources of bias in the data, since respondents who inaccurately identified their gender or nationality could compromise the reliability and accuracy of the results. Despite attempts to assure the authenticity of the responses, these limitations must be acknowledged, as they may skew the findings and influence the interpretation of data.

The first few questions of the survey were deliberately designed as open-ended instead of multiple-choice, to prevent respondents from randomly guessing the correct answers by chance. This approach was taken as it was deemed the best way to assess and accurately evaluate participants' true financial understanding and knowledge. However, such approach may have presented a difficulty for individuals with poorer financial literacy, as they might have deemed the questions too challenging and opted not to complete the survey entirely. Consequently, there is a possibility that individuals with lesser financial literacy, who were the study's focus, will be underrepresented in the data. This constraint may distort the findings and reduce the visibility of the very demographic the survey aimed to evaluate.

Certain respondents may have specialised in finance or related fields, leading to an enhanced level of financial literacy due to their comprehensive grasp of fundamental financial concepts. While the survey asked participants about their highest education attainment, it did not directly enquire about their field of study or specialisation. Consequently, individuals with formal education in finance may be overrepresented in the data, as it is likely that the survey title sparked their curiosity and interest in the subject, prompting them to participate, thus distorting the results. Their extensive knowledge may have enabled them to perform better, potentially disguising the actual financial literacy levels of the general population or those lacking such specific education.

The online survey required internet connectivity, digital literacy as well as fundamental reading and writing skills as prerequisites. As a result, individuals failing to meet these criteria, especially women who are older in age, automatically couldn't participate in the study, hence, limiting the study's reach to that demographic.

3.10 Conclusion

The research methodology employed ensures that the research objectives are successfully met. The following chapter will present and analyse the results obtained from the data collected through the semi-structured questionnaires and compared to the secondary data for further insight.

Chapter 4 – Analysis and Results

4.1 Introduction

The questionnaire results are presented in this chapter together with a thorough analysis, discussion, and exploration of their implications. Section 4.2 presents the results of the questionnaire together with a comparison with the OECD average, the Maltese average as per OECD, and the top-performing countries to help to contextualise local performance and draw attention to areas where respondents either match or deviate from other nations. Section 4.3 looks and addresses the overall financial literacy levels across three major components being, financial knowledge, financial behaviour, and financial attitudes, whilst comparing these results with OECD and past research. Section 4.4 covers the key conclusions with respect to holding of financial products. Section 4.5 addresses the important findings regarding socioeconomic factors including income, education, age, and employment status. Section 4.6 offers a comprehensive study and discussion of digital financial literacy. Finally, Section 4.7 addresses the financial wellbeing results.

4.2 Results from Questionnaire

Any Maltese women over the age of 18 was eligible to participate in the questionnaire. A total of 213 responses were received over a one-month data collection period between September and October. The questionnaire was made up of 54 questions. Only the most pertinent statistics are shown here to keep clarity and flow. A complete collection of all graphs and tables is found in Appendix C.

The data derived from the semi-structured questionnaire was compared with the data from the 'OECD/INFE 2023 international survey of adult financial literacy'. Utilising this secondary data allowed for comparison by aligning the questionnaire results with the OECD's benchmarks. The OECD data provided a reference point for a detailed analysis of Malta's financial knowledge, behaviour, and attitudes, as well as its performance in relation to international trends over time.

Respondents' financial literacy will be analysed against the OECD average, the Maltese average, and the highest country averages where possible.

When it comes to the OECD's scores for the individual questions, the OECD doesn't break down the individual question results to represent the average of men and women individually. Therefore, this does not allow for a meaningful comparison. Although these are being compared and contrasted, certainty in terms of analysis cannot be fully expressed.

4.2.1 Financial Knowledge Questions

Financial Knowledge Question	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average	Highest scoring Country (China)
Time value of money	66.67%	24.6%	69.5%	92.3%
Interest on a loan	91.08%	89.1%	86.9%	99.6%
Simple Interest Calculation	87.79%	83.3%	55.7%	94.3%
Compound Interest Calculation	45.07%	41.9%	44.5%	79.2%
Risk and Return	90.61%	n/a	78.7%	92.1%
Definition of inflation	95.77%	n/a	86.6%	98.3%
Risk Diversification	72.77%	n/a	59.6%	82.9%

Table 4.2.1 Financial Knowledge

The financial knowledge questions assessed the understanding of essential financial concepts. Participants demonstrated a solid understanding of concepts like loan interest, risk and return, and inflation. Although it was the first time risk-return and inflation concepts were inquired upon in Malta, Maltese women showed a strong understanding, exceeding the OECD averages.

Knowledge gaps emerged in areas such as the time value of money, with only 66.67% of respondents answering correctly. Additionally, there is a significant difference between understanding of simple and compound interest where whilst 87.79% correctly answered questions on simple interest, only 45.07% managed to answer the compound interest question accurately. This indicates that only 41.78% of respondents successfully answered both interest-related questions correctly, highlighting a significant area for improvement in financial literacy. Participants also showed a need for improvement in understanding risk diversification, indicating further gaps in financial literacy that could benefit from targeted educational efforts. All the results and the areas where improvement is needed are in line with the OECD averages, indicating that respondent engagement has remained unchanged. This implies that the categories with low scores and knowledge gaps among participants have stayed constant despite some development. Nevertheless, when compared to Malta's performance in the 2023 questionnaire, Malta still made significant improvement, yet when it comes to China, the highest scoring country, Malta still lags behind.

4.2.2 Financial Attitudes

Financial Attitude Question	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average	Highest scoring Country (Thailand)
Spending money vs saving it for the long term	46.48%	53.6%	41.8%	81.6%
Live for today attitude	69.95%	n/a	43.8%	84.0%
Money is there to be spent	30.51%	32.1%	26.3%	n/a

Table 4.2.2 Financial Attitude

Maltese women indicated that they have a problem when it comes to financial attitudes. Only 30.51% disagreed with the statement that money is there to be spent, which is 1.59% less than Malta's average in 2023. Despite this, it is still above the OECD's which stood at 26.3%. Only 46.48% disagreed with the statement that it is more satisfying to spend rather than save it for the long-term, which although it is higher than the OECD's average of 41.8%, it is still lower than Malta's 2023 average. Therefore, the results found in the questionnaire are lower than Malta's own OECD average which ultimately shows that Malta not only didn't improve but it performed worse when it came to financial attitudes. Additionally, whilst it reached the OECD average, Malta is still way behind reaching the highest scoring country. This finding is worrying as limited financial awareness leads to increased borrowing and less saving (Stango and Zinman, 2009).

4.2.3 Financial Behaviour Questions

Financial Behaviour Question	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average
Keeps track of money in the short term	71.83	61.7%	65.3%
Actively saving	100%	83.1%	70.9%
Not borrowing to make ends meet	94.84%	66.0%	81.0%
Keep a close watch on personal financial affairs	86.85%	83.0%	70.2%
Sets long term financial goals	48.83%	65.9%	45.5%
Makes Considered Purchases	90.61%	77.5%	67.9%
Pays bills on time	98.12%	91.3%	83.0%

Table 4.2.3 Financial Behaviour

Maltese women show an exceptional amount of positive financial behaviour. In fact, according to the OECD report, Malta had the highest overall average in terms of financial behaviour. This confirms that women usually excel at budgeting (Dwivedi, Purohit and Mehta, 2015). Maltese women not only met the OECD averages when it came to actively saving, not borrowing to make ends meet, keeping a close watch on personal financial affairs, making considered purchases and paying bills on time, but also exceeded the averages of the highest scoring country in this sector. Whilst in 2023 Malta failed to reach the OECD’s average when it came to keeping track of money and not borrowing to make ends meet, Maltese participants not only met but surpassed this benchmark in this study. Malta improved in all sectors except for setting long term financial goals, where although it met the OECD average, it decreased significantly from the Malta 2023 average. The questionnaire data revealed that only 48.83% of respondents currently set long-term financial goals, a decline from 65.9% in 2023.

4.2.4 Digital Financial Knowledge Questions

Digital Financial Knowledge Question	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average
Validity of Digital Financial Contracts	61.97%	n/a	45.7%
Use of Publicly Shared Personal Data	84.04%	n/a	64.2%
Legal Tender Status of Crypto-Currencies	65.73%	n/a	47.8%

Table 4.2.4 Digital Financial Knowledge

This was the first time that digital financial literacy questions were introduced in Malta. When tested on digital financial contracts, 61.97% of Maltese participants answered correctly, notably higher than the OECD's average of 45.7%. Furthermore, 84.04% of participants correctly recognised that personal data can be used to target individuals with offers, surpassing the OECD average of 64.2%. However, 65.73% of respondents believed that cryptocurrencies hold the same legal tender status as banknotes and coins, a misconception that exceeds the OECD's average of 47.8%. Given this section is relatively new addition, findings revealed significant variation in digital financial literacy across countries where participants from certain countries performed well on some questions but poorly on others. Consequently, no direct country comparison is made, as all countries show room for improvement.

4.2.5 Digital Financial Behaviour Questions

Digital Financial Behaviour Question	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average
Sharing of Bank Account Passwords	97.19%	n/a	88%
Verifying Regulators of Online Financial Providers	63.38%	n/a	35%
Public Sharing of Personal Financial Information	97.65%	n/a	84%
Regularly Changing Online Finance Passwords	27.7%	n/a	26%

Table 4.2.5 Digital Financial Behaviour

Although this was the first time these questions were asked in Malta, Maltese women showed a relatively strong behaviour when it came to digital financial literacy, with all question responses exceeding the OECD’s average. Participants expressed strong opposition to sharing sensitive financial information, with over 97% disagreeing with the statement, “I share the passwords and PINs of my bank account with close friends,” indicating an almost unanimous stance against this practice. Additionally, nearly 64% agreed with, “Before buying a financial product online, I check if the provider is regulated in my country”, reflecting caution when engaging with financial products online. Almost all participants disagreed with sharing personal financial details publicly online, further underscoring privacy concerns. However, only 27.7% agreed with, “I regularly change the passwords on websites I use for online shopping and personal finance”, revealing a potential area for improvement.

4.2.6 Digital Financial Attitudes Questions

Digital Financial Attitude Question	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average
Safety of using Public Wi-Fi to online shop	69.02%	n/a	49%
Importance of Website Security in Online Transactions	88.74%	n/a	69%
Importance of Reading Terms and Conditions for Online Purchases	57.75%	n/a	55%

Table 4.2.6 Digital Financial Attitude

The majority of participants, 69.02%, expressed some level of disagreement with the belief that it is safe to shop online using public Wi-Fi networks. Nearly all participants agreed on the importance of checking a website's security before making an online transaction, with 88.74% in

agreement. Additionally, almost 60% disagreed to some extent with the notion that reading terms and conditions is unimportant when purchasing online. All OECD averages were exceeded in these areas.

4.2.7 Financial Wellbeing Question

Objective Wellbeing/ Financial Resilience	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average	Highest scoring Country (Germany)
Ability to Cover a Major Expense Without Assistance	76.06%	72.5%	62.1%	85.3%
Income Insufficiency for Living Expenses in the Last 12 Months	69.01%	49.0%	64.0%	85.9%
Financial Resilience in the Event of Income Loss	72.77%	62.5%	49.3%	75.4%
Having Money Left Over at the End of the Month	78.87%	45.0%	43.08%	68.8%

Table 4.2.7.1 Objective Wellbeing/Financial Resilience

Subjective Wellbeing	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average	Highest scoring Country (Germany)
Satisfaction with Current Financial Situation	50.70%	36.1%	39.9%	68.5%
Financial Situation's Impact on Life Goals	45.07%	24.7%	35.4%	69.3%
Current Debt Burden	71.83%	65.3%	69.9%	87.8%
Worrying About Covering Living Expenses	53.52%	30.7%	34.8%	67.6%
Financial Control Over Personal Life	49.76%	29.7%	38.2%	53.8%
Feeling Financially Limited in Achieving Life Goals	60.56%	n/a	42.5%	76.1%
Concerned money won't last	42.25%	n/a	36.7%	67.0%
Struggling to Get by Financially	52.58%	n/a	37.8%	53.0%

Table 4.2.7.2 Subjective Wellbeing

Although the results to all questions have improved compared to the OECD's survey, they remain similar, indicating that subjective wellbeing continues to lag behind financial resilience. The statistics show individuals' complicated financial resilience and subjective wellbeing. Financial satisfaction is almost evenly split with 50.70% satisfied. When asked if finances limit their activities, 33.8% disagree, 24.88% agree, and 20.19% are indifferent, reflecting a mix of opinions and hesitation. A substantial majority, 76.06% of participants, indicated that they could manage a major expense without resorting to borrowing. When asked if their salary adequately covered their living expenditures, 69.01% answered no, indicating that many may be experiencing financial difficulties despite their ability to manage unexpected costs. Approximately 46.01% reported the ability to maintain their living expenditures for six months or

more following a loss of income, indicating a significant degree of financial readiness among participants. Furthermore, 78.87% reported having surplus funds at the end of each month, indicating smart financial management amongst women.

4.2.8 Financial Awareness of Products

Awareness of Financial Products	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average
Awareness of payment products	99.53%	97.5%	91.2%
Awareness of saving, investment, or retirement products	100%	98.8%	90.6%
Awareness of credit products	100%	96.8%	90.5%

Table 4.2.8 Awareness of Financial Products

Malta exceeded not just the OECD averages but also Malta's past performance as well as the top-performing country in terms of financial product awareness. This reflects a well-educated public on accessible financial goods, therefore facilitating informed decision-making in the financial sector.

4.2.9 Financial Holding of Product

Holding of Financial Products	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average
Holding of payment products	97.18%	96.2%	79.7%
Holding of saving, investment, or retirement products	94.84%	95.2%	57.4%
Holding of credit products	67.14%	75.9%	56.6%

Table 4.2.9 Holding of Financial Products

Maltese women hold more payment products than the OECD's average, Malta's previous year's average, and even the highest-scoring country. However, Maltese women hold fewer savings, investment, and retirement products compared to Malta's 2023 national average, which may indicate a gap in long-term financial planning or a focus on more immediate financial needs. This aligns with the financial attitudes results presented in Table 4.2.2, suggesting that women may face challenges with long-term financial planning and tend to prioritise immediate needs over future considerations. This is in line with a recent Bank of America (2024) study where it was found out that although most women say they feel comfortable with their daily expenses, they have a difficult time saving for emergencies, retirement, and growing wealth. Additionally, whilst most women believe they are doing a good job of providing for their immediate financial requirements, they find it difficult to make plans for their future financial stability. Women also frequently regret not saving and investing sooner since doing so would have given them a better basis for accumulating money to meet changing requirements during longer lifespans. While a significant number of Maltese women do hold these products, it is still concerning. In terms of credit products, although Maltese women exceed the OECD average, their ownership falls below both Malta's previous national average and the highest-scoring country.

4.2.10 Victim of Fraud or Scam

Adults who have been a victim of a financial fraud or scam	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average	Highest scoring Country (Philippines)
Adults who have been a victim of a financial fraud or scam	26.29%	n/a	14.0%	31.5%

Table 4.2.10 Adults who have been a victim of financial fraud or scam

Maltese women exceeded the OECD average of being a victim of a fraud or scam by more than 12%, which is worrisome. This finding exhibits the necessity of more financial knowledge and preventive actions to stop fraud.

4.2.11 Managed Financial Products and Services Online

Managed financial products and services online	Maltese women who answered the questionnaire correctly	Malta OECD Average	OECD Average	Highest scoring Country (Netherlands)
Managed financial products and services online	88.73%	31.8%	47.0%	77.8%

Table 4.2.11 Managed financial products and services online

With 88.73% handling financial products and services online, Maltese women greatly outperformed the highest-scoring nation, the OECD average, and Malta's own average. As more individuals are managing their money online, this leads to greater fraud rates. This partially explains the high rate of fraud or scam victims among Maltese women, with nearly 90% managing their finances online. The high proportion of online financial management among Maltese women may make them vulnerable to fraud and scams, highlighting the need for a

focused approach in this sector. Additionally, this is in line with Zammit (2023), who expressed that there has been a rise in financial fraud, where financially illiterate people are more likely to be scammed.

4.3 Analysis and Discussion of the Overall Financial Literacy

Results and Comparison with the OECD Literature

Each individual response was carefully analysed on Microsoft Excel, with a specific score allocated to each answer according to its alignment with established financial literacy criteria. The total financial literacy score was calculated by summing up the financial knowledge, behaviour, and attitudes scores. To facilitate consistency and comparability, this cumulative score was standardised on a scale ranging from 0 to 100, providing a clear and interpretable measure of overall financial literacy. Reference to these calculations can be made in Appendix D.

4.3.1 Overall Level of Financial Literacy

Overall Financial Literacy Score	Maltese Women Score (the questionnaire)	Maltese Women Score OECD Average	OECD Women Average	Highest scoring Country Women Average (Germany)
Overall Financial Literacy Score	76.05%	66%	61%	75%

Table 4.3.1.1 Overall Level of Financial Literacy Score

Minimum Target Financial Literacy Score	Maltese Women Score (the questionnaire)	Malta Score OECD Average	OECD Average	Highest scoring Country Average (Germany)
Minimum Target Financial Literacy Score	78.40%	45.5%	38.9%	75.5%

Table 4.3.1.2 Minimum Target Financial Literacy Score

Overall, the average of the financial literacy scores resulted to be 76.05%, whilst the minimum target score for financial literacy, which is defined as scoring at least 70%, was found to be 78.40%. The marginal discrepancy between the overall financial literacy score and the minimum target financial literacy score in the dataset indicates that high-scoring individuals may be affecting the aggregate result, therefore marginally raising the total score over the average. This may also suggest that specific elements of financial literacy, hold greater significance and weighting in the overall score computation. Given that the average financial literacy is smaller than the average minimum target score achieved, it indicates that there is some degree of development which may be made in improving this score.

When compared to the OECD results, Malta was already above the OECD average by 5% as the average financial literacy score for women in Malta was that of 66%, 3% lower than the average financial literacy score for men in Malta. This highlights an exceptional improvement, with average financial literacy levels increasing by almost 10%. Additionally, Malta outscored the highest scoring country, highlighting Malta's solid performance in financial literacy within Europe.

4.3.2 Financial Knowledge

Overall Financial Knowledge Score	Maltese Women Score (the questionnaire)	Maltese Women Score OECD Average	OECD Women Average	Highest scoring Country Women Average (China)
Overall Financial Knowledge Score	78.60%	56%	63%	89%

Table 4.3.2.1 Overall Financial Knowledge

Minimum Target Financial Knowledge Score	Maltese Women Score (the questionnaire)	Maltese Women Score OECD Average	OECD Women Average	Highest scoring Country Women Average (China)
Minimum Target Financial Knowledge Score	79.34%	46.3%	57.7%	93.6%

Table 4.3.2.2 Minimum Target Financial Knowledge

The average financial knowledge was found to be 78.60%, with the minimum target financial knowledge, that is answering at least 5 correct questions out of 7, at 79.34%. In 2023, Malta's financial literacy score of 56% fell 7% below the OECD average of 63%. This highlights an exceptional improvement, with average financial literacy levels increasing by more than 20%. However, there is still substantial improvement to be made as Malta still lags behind China, who score an impressive 89%. Additionally, only 24.88% of respondents answered all financial knowledge questions correctly. Therefore, even though the averages are high, effort still needs to be made until everyone is aware of all the financial concepts and can answer all questions correctly.

4.3.3 Financial Behaviour

Overall Financial Behaviour Score	Maltese Women Score (the questionnaire)	Maltese Women Score OECD Average	OECD Women Average	Highest scoring Country Women Average (Saudi Arabia)
Overall Financial Behaviour Score	84.44%	75%	61%	76%

Table 4.3.3.1 Overall Financial Behaviour Score

Minimum Target Financial Behaviour Score	Maltese Women Score (the questionnaire)	Maltese Score OECD Average	OECD Average	Highest scoring Country Average (Saudi Arabia)
Minimum Target Financial Behaviour Score	89.67%	75.5%	52.4%	81.4%

Table 4.3.3.2 Minimum Target Financial Behaviour Score

The average financial behaviour was found to be 84.44%, with the minimum target financial behaviour, that is answering at least 5 correct questions out of 7, at 89.67%. In 2023, Malta's financial literacy score of 75% was well above the OECD average of 61%. Although Malta had the highest average score in overall financial behaviour in men and women, it did not have the highest percentage of individuals with minimum target financial behaviour. This indicates that although, on average, Malta's citizens show better financial practices and behaviours than those of other nations in the study, when looking at the percentage of individuals attaining a minimal benchmark or target level for financial behaviour, Malta did not rank the highest. Therefore, even if general averages are good, a smaller percentage of the population satisfies or surpasses a certain objective criteria.

4.3.4 Financial Attitudes

Overall Financial Attitudes Score	Maltese Women Score (the questionnaire)	Maltese Women Score OECD Average	OECD Women Average	Highest scoring Country Women Average (Thailand)
Overall Financial Attitudes Score	56.89%	64%	59%	77%

Table 4.3.4 Financial Attitudes

The financial attitudes questions measures money and future planning attitudes. Every question assesses the attitude for short-term expenditure, therefore expressing a "live for today" attitude, which may hinder financial wellbeing. The average financial attitude stood at 56.89%. This is alarming as it is lower than both the OECD's average as well as Malta's average in 2023.

4.4 Main Findings in relation to holding of Financial Products

While the financial literacy score may initially appear relatively high, suggesting that Malta has made progress, a closer analysis reveals underlying concerns. Even though 92.02% of participants had a savings account, more than half of the respondents, 56.12%, couldn't answer a question on compound interest correctly. This large difference suggests that financial education is needed to fill these core knowledge deficits in personal finance. This discrepancy is worrisome since compound interest is a basic concept, and it is crucial for saving and investing. Without this understanding, people may fail to maximise financial development or make smart financial decisions, missing out on wealth building and long-term financial stability. This mismatch between savings account ownership and interest theory shows focused financial education is needed.

Additionally, although 97.18% of participants hold financial products, only 78.26% achieved the minimum target score for financial literacy, meaning that 21.74% didn't reach the minimum

target score. Furthermore, out of 26.29% who have been a victim of fraud or scams, 28.57% do not reach the minimum target financial literacy score.

While 94.84% of participants hold savings, investment, and retirement products, a significant portion lack understanding of key financial concepts. Specifically, out of these 94.84%, 34.16% do not grasp the time value of money, 8.42% are unclear on loan interest, 12.87% do not understand simple interest, and 55.45% lack knowledge of compound interest. Additionally, 8.91% do not understand the risk-return relationship, 4.46% are unfamiliar with inflation, and 27.23% do not understand risk diversification. Out of the 67.14% who hold credit products, only 41.26% understand simple and compound interest. This gap between product ownership and financial knowledge suggests that many individuals may be using financial products without fully comprehending critical aspects, potentially limiting their ability to make informed financial decisions and maximise the benefits of these products.

4.5 Main Findings in relation to Socio-economic Factors

4.5.1 Main Findings in relation to Income

26.35% of the 78.40% who met the minimum financial literacy benchmark are in the highest income category, while 40.72% are in the second-highest income category. Despite the anonymity of the survey, several participants responded, “prefer not to say”. It could be that the individuals who did not disclose their income may indicate that they are high-income but choose not to share it for personal reasons.

Figure 4.5.1 illustrate the correlation between monthly family income and financial literacy. It could be seen that the average financial literacy percentage remains consistently stable across all socioeconomic categories, with only minor variations. Households with higher incomes (earning €3,132 or more monthly) and middle-income households (€1,124 to €3,131 monthly) exhibit somewhat superior average financial literacy compared to lower-income households

(earning up to €655 monthly), which possess the lowest average financial literacy. The box plot offers detailed information, illustrating the distribution of financial literacy percentages throughout each income range. Those falling under higher income groups show more consistency with fewer outliers, suggesting a constant level of financial literacy. The lowest-income group has a wider spectrum of financial literacy scores, encompassing lower-end outliers, which signifies more unpredictability and possible gaps in financial understanding. This indicates that persons in lower-income brackets are more prone to fluctuations in financial understanding, potentially affecting their financial decision-making capabilities.

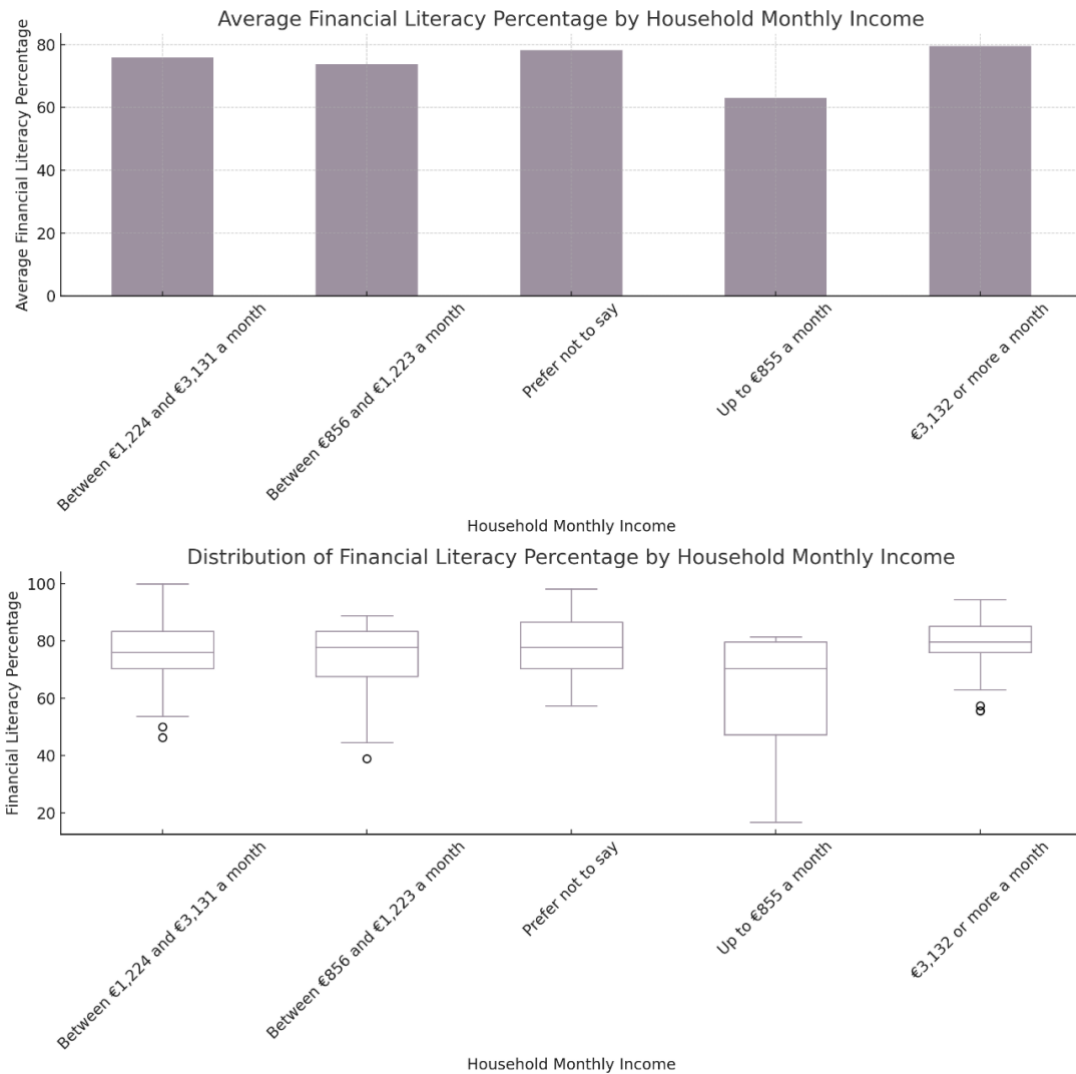


Figure 4.5.1 Average financial literacy by household monthly income

The fact that financial literacy is higher amongst individuals with higher incomes is in line with various other studies such as Agarwalla et al., 2015, Arora, 2016, Atkinson and Messy, 2012, Batsaikhan and Demertzis, 2018, Bucher-Koenen et al., 2017, Chen and Volpe, 1998, Lusardi and Mitchell, 2008, 2011 and more recently, the OECD, 2023. These studies findings that financial literacy is generally lower among young adults and higher among middle-aged adults is challenged by the fact that 31.74% of those attaining this financial literacy level are between the ages of 18 and 29, and 33.53% are between the ages of 35 and 54. This distribution suggests that, contrary to the OECD's findings of lower financial literacy among young adults and higher levels among middle-aged individuals, younger adults in this sample show relatively high levels of financial literacy.

4.5.2 Main Findings in relation to Education

The OECD's findings that individuals with higher educational attainment tend to manifest greater levels of financial literacy are supported by this study. This is because 75.44% of the 78.40% who attained the minimum financial literacy score hold a tertiary education degree. This implies that formal education is instrumental in providing individuals with the financial knowledge and skills necessary to make more informed financial decisions.

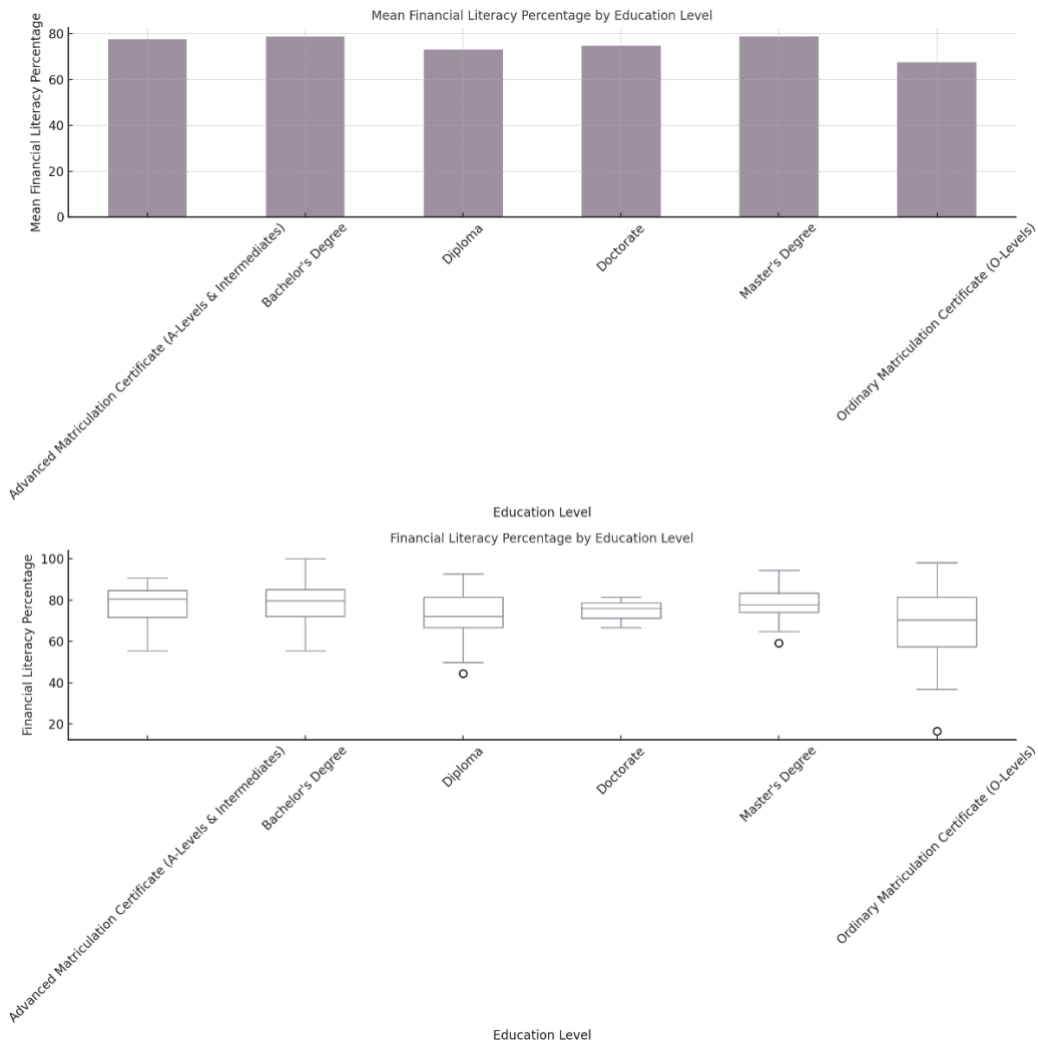


Figure 4.5.2 Financial Literacy by Education Level

Figure 4.5.2 illustrates financial literacy levels categorised by education, indicating that those with higher educational achievement often possess superior financial literacy. It is clearly visible that average financial literacy percentages remain consistently elevated across various education levels, with individuals possessing advanced degrees (Bachelor's, Master's, Doctorate) achieving marginally higher scores on average compared to those with lower qualifications, such as Ordinary Matriculation Certificates (O-Levels). The box plot illustrates that financial literacy scores among highly educated persons are higher and more consistent, with fewer outliers, whereas those with only basic education have greater fluctuation, including

many notably lower scores. The findings indicate a favourable link between educational achievement and financial literacy, highlighting the importance of further education in enhancing financial comprehension and information retention.

Although the survey could be filled by anyone, irrelevant of their education background, upon analysing, it was found that 72% of respondents had tertiary education degrees, where over 1% had a PhD, almost 20% had a master's degree, 38.5% had a bachelor's degree, and about 12% had a diploma. This strengthens the generally accepted view that more financial literacy is directly related with higher education (OECD, 2023, Agarwalla et al., 2015, Arora, 2016, Atkinson and Messy, 2012, Batsaikhan and Demertzis, 2018, Bucher-Koenen et al., 2017, Chen and Volpe, 1998, Lusardi and Mitchell, 2008, 2011).

This considerable fraction of highly educated people perhaps helps to explain why the sample's overall financial literacy was very high. Given the significant relationship between education and financial literacy, it explains why a solid understanding of financial concepts was shown. Nevertheless, it's important to recognise that this finding, especially the high degree of financial literacy among women, may not be totally reflective of the overall public. It is possible that women with lower levels of financial literacy were less likely to participate in the survey, either because of a lack of confidence or interest in financial matters. Therefore, the capacity to generalise and apply the results to all women might be limited because of the possible bias towards individuals in the sample with more education and financial awareness. As a result, the findings are interesting; yet they should be taken carefully as they could have omitted from the survey people who are less financially savvy.

4.5.3 Main Findings in relation to Age

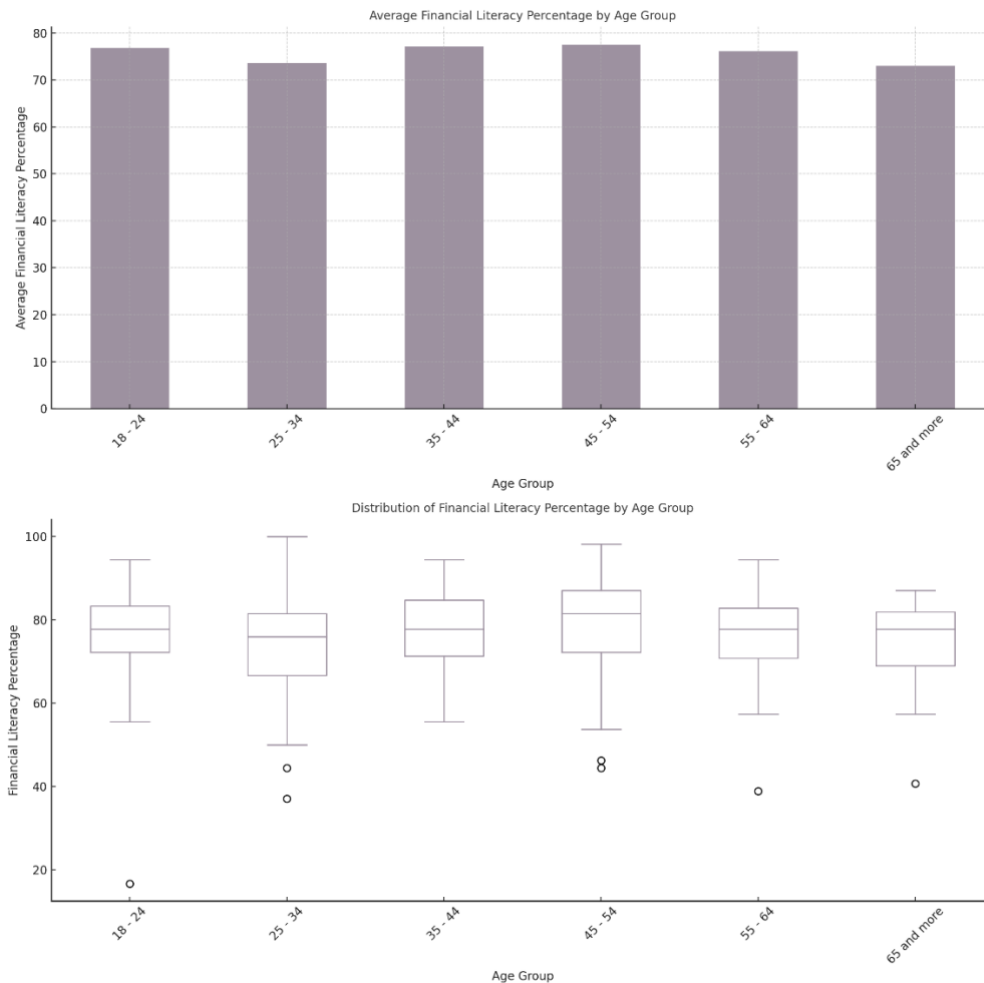


Figure 4.5.3 Financial Literacy by Age Group

Figure 4.5.3 illustrates the relationship between the age groups and the overall percentages of financial literacy. The average percentage of financial literacy across age groups is pretty constant, with only slight changes, indicating that financial literacy skills are mostly constant throughout age groups. A more thorough picture of the distribution within each age group is given by the box plot that further supports the argument. It demonstrates that, despite some variance in dispersion, the median financial literacy percentage is consistently high throughout groups. Although the interquartile ranges for each group are somewhat comparable, there are

several noteworthy outliers that show that the percentage of people in each age group who are financially literate is much lower. Even if the overall average is constant throughout age groups, this variation within groups may be a reflection of individual variances in financial knowledge, experience, or confidence in financial decision-making.

Although the age groups of 35–44 and 45–54 had the greatest average financial literacy scores, they were only just a few percentage points higher than the other categories. This slight variation raises the possibility that a bigger sample size is required to ascertain if middle-aged women possess the highest level of financial literacy. Therefore, the findings in this study don't confirm, Agarwal et al. (2009), Lusardi and Mitchell (2011); Mottola (2013), and Klapper, Lusardi and Van Oudheusden (2015), "hump-shaped", or "reverse U-shape" pattern. Most participants were in employment and had tertiary degrees, which may explain the same financial literacy rates across all age groups, making it harder to identify patterns across age groups.

4.5.4 Main findings in relation to Employment Status

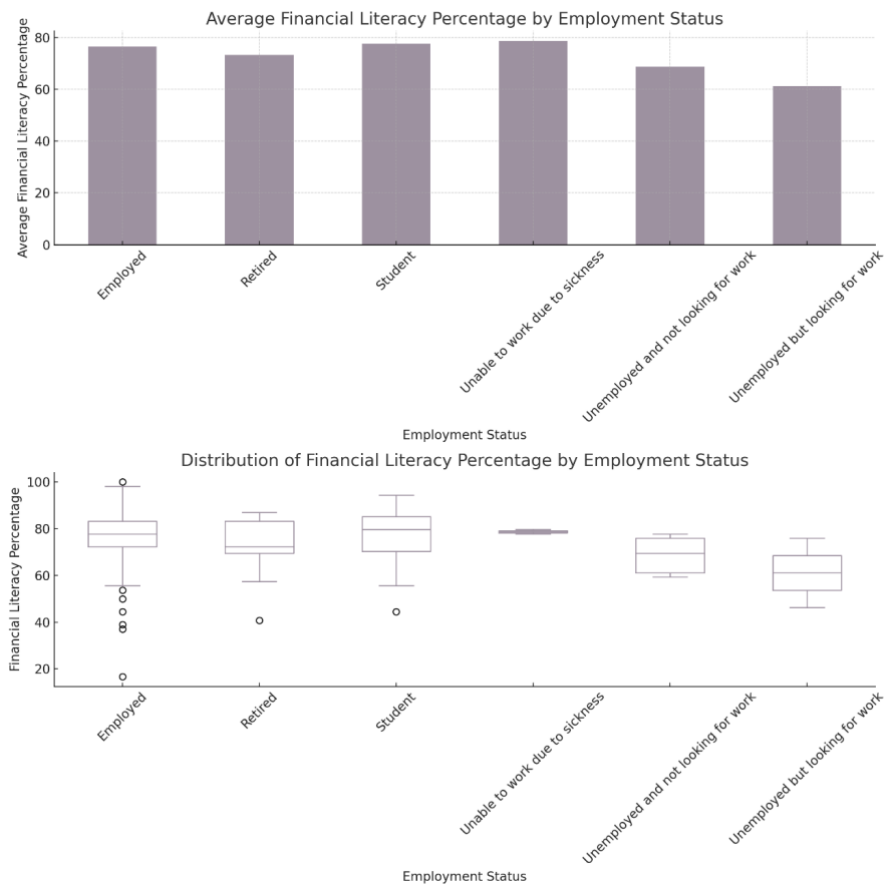


Figure 4.5.4 Financial Literacy by Employment Status

The survey results revealed that more than 66% of the participants were employed, which is usually connected to higher financial literacy. Working helps individuals to grasp financial knowledge more deeply. Employed people also more likely have access to retirement plans, corporate financial education programs, and other financial tools supporting their financial literacy. This link between employment and financial literacy helps to explain why those who work usually show better financial knowledge and skills. Therefore, the participants high degree of financial literacy is probably related to their quite high employment rate.

Figure 4.5.4 show average financial literacy percentages broken down by employment status. The bar chart indicates that employed people and students exhibit greater literacy skills than

unemployed people. However, the average financial literacy percentage is very equal across employment categories. The box plot shows the distribution inside every category, therefore stressing differences in financial literacy. For instance, the "Employed" category shows a wide spectrum of financial literacy skills as there are some lower-end outliers. Individuals "Unable to work due to sickness" have a somewhat tight range, implying low variability within this sample, retired and student groups exhibit moderate variability with less outliers. Unemployed categories show some variation without very severe extremes.

Numerous research has found how financial literacy is higher employed people and educated people than those who are unemployed or less educated people (Lusardi and Mitchell, 2011, Lusardi and Tufano, 2009, OECD, 2023). This is because employment gives people access to financial tools and resources, whilst higher education teaches critical thinking for financial decision-making. The research study supports this, as the employed and student categories have the highest average financial literacy, whilst those who are unemployed scored the lowest when financial literacy was measured.

4.6 Analysis and Discussion of the Overall Digital Financial Literacy Results

Digital financial literacy was measured the same way as financial literacy, that is by summing up the financial knowledge, behaviour, and attitudes scores, and then rescaling to 100. This was the first time that digital financial literacy was measured in Malta.

Overall, digital financial literacy in Malta reached 71.31%, well above the OECD average of 55%. However, Malta's minimum target digital financial literacy score was 65.72%, indicating that while the average score is relatively high, fewer individuals actually met the minimum target. Additionally, fewer than 4% achieved a perfect score in digital financial literacy.

While 88.73% of participants reported that they manage financial products and services online, only 67.72% of these achieved the minimum target score for digital financial literacy.

Additionally, among the 7.98% who hold crypto-assets, 35.29% couldn't even correctly answer a basic question on crypto-assets which is a concerning finding, as it suggests many hold these assets without fully understanding them.

4.7 Financial Wellbeing

The findings reflect an average financial wellbeing score of 63.73%, suggesting moderate financial wellbeing among participants. Nevertheless, fewer than 14% achieved a perfect score, highlighting that only a limited fraction of participants exhibits ideal financial well-being.

Participants exhibited a good amount of financial resilience, achieving an average score of 74.18%, indicating that on average, most participants are equipped to manage financial shocks or unexpected expenditures. Conversely, the average subjective well-being score is 53.29%, indicating that, individuals may have less satisfaction or security over their overall financial circumstances. Moreover, less than 50% of the participants achieved the minimum financial wellbeing score, indicating a significant lack in financial wellbeing.

Bucher-Koenen et al. (2017) stated how subjective and objective financial literacy judgements differ, which greatly impacts financial decision-making. This could also be seen in this study, where financial resilience is much higher than subjective wellbeing. This supports existing literature that women rate themselves lower than men in terms of self-assessed financial literacy (Barber and Odean, 2001, Beyer, 1990, Chen and Volpe, 2002, Dahlbom et al., 2011). Additionally, the low score when it comes to subjective literacy confirms that women worry more about their financial future (Anthes & Most, 2000).

Although the OECD report indicates that financial wellbeing is generally higher among adults aged 60 and above compared to those aged 30-59 and younger individuals exhibiting lower financial wellbeing, this study found different results. Particularly, 26.67% of participants aged

18-24 achieved the minimum financial wellbeing objective, with 15.24% of those aged 25-34, 18.1% of those aged 35-44, 19.05% of those aged 45-54, 15.24% of those aged 55-64, and only 5.71% of those aged 65 and older achieving the same. This distribution implies that the financial wellbeing of the younger age groups in this sample may be stronger than anticipated, particularly in comparison to those over 65.

66.67% of the 49.30% who achieved the minimum financial wellbeing score are in the two highest income brackets, highlighting a clear link between higher income and financial wellbeing. 73.3% of the 49.3% of participants who attained the minimum financial wellbeing score have a tertiary education, indicating a potential correlation between higher education and increased financial literacy. Furthermore, the correlation between financial literacy and overall financial well-being was further validated by the fact that 54.49% of the 78.4% who met the minimum financial literacy benchmark also achieved the financial wellbeing score. This correlation suggests that educational attainment may be a significant factor in the development of the skills required for financial stability and resilience. This is in line with the OECD's findings.

4.8 Conclusion

This chapter reported on the data collected through an online questionnaire and addressed the main findings of the analysis, providing comparisons with secondary data.

Chapter 5 – Conclusion and Recommendations

5.1 Introduction

This chapter concludes the research study by summarising the results, addressing constraints, and proposing areas for future research. The study's summary is provided in Section 5.2. The main findings are discussed in Section 5.3. The primary constraints encountered during the research are addressed in Section 5.4, while Section 5.5 provides recommendations based on the findings. Lastly, Section 5.6 proposes prospective areas for future inquiry.

5.2 Summary of the Study

Financial literacy is a crucial 21st century skill which helps people make educated financial decisions, manage risks, plan for retirement, avoid scams and handle cost-of-living issues, ultimately improving personal and social well-being. Many individuals are unable to make informed financial decisions due to a lack of knowledge, which frequently leads to negative consequences (Allgood & Walstad, 2016). This study investigated the extent to which the global trend of lower financial literacy among women applies to Malta by analysing the financial knowledge, behaviours, and attitudes of Maltese women. The study aims to identify recurring challenges and opportunities for development by comparing current findings with previous data. Financial literacy amongst Maltese women was measured through a questionnaire, using the OECD's toolkit which is an effort made to have a standardised and comparable way of measuring financial literacy. Although Malta has participated in the OECD financial literacy surveys before, the OECD emphasises the importance of ongoing reassessment to monitor progress and identify areas for improvement. Therefore, this study provided new updated data on the financial literacy of Maltese women, a demographic that typically scores lower than men. Additionally, this study not only retested previous questions but also introduced new ones from the OECD Toolkit that have never been asked or investigated in Malta before, including several questions on digital financial literacy, risk, inflation, and diversification. This study was the first to assess these new areas in accordance with the OECD Toolkit, providing a foundation for

international benchmarking and policy refinement. The study contrasted recent findings with past data which hence identified recurring challenges and tested the hypothesis of lower financial literacy in Maltese women.

5.3 Main Findings

The main findings in terms of the study's objectives are summarised in the below tables.

Objective 1: To measure the level of financial literacy amongst women in Malta
<p>Findings:</p> <ul style="list-style-type: none">• Based on the findings of this thesis, Maltese women demonstrated an improvement in financial literacy, surpassing the OECD average and reaching the highest-ranking countries. Nevertheless, given the average financial literacy percentage was around 75%, there remains a 25% gap where further improvement is possible.• Whilst 78.40% achieved the minimum target financial literacy score of 70%, less than 40% achieved at least 80% financial literacy score and only 0.47% achieved a perfect financial literacy score.• Although there have been advancements in financial literacy, there is still a portion of the population that has not yet achieved the minimum target literacy levels, despite the fact that they hold a variety of financial products.

Table 5.3.1 Objective 1 Main Findings

Objective 2: To compute digital financial literacy scores, assessing Maltese women's ability to use digital tools for managing personal finances.
<p>Findings:</p> <ul style="list-style-type: none"> • Digital financial literacy in Malta reached 71.31%, well above the OECD average of 55%. • Malta's minimum target digital financial literacy score was 66%, indicating that while the average score is relatively high, fewer individuals actually met the minimum target. • Fewer than 4% achieved a perfect score in digital financial literacy. • Although many people possess cryptocurrencies, there is a general ignorance of these assets, suggesting a gap between asset ownership and the required expertise to handle them securely. • More knowledge of basic digital practices, such as routinely changing online passwords, closely reading terms and conditions, and being alert about fraud and scams, is also much needed.

Table 5.3.2 Objective 2 Main Findings

Objective 3: To identify how socio-demographic factors including age, education level, income and employment status impact the financial literacy levels of Maltese women.
<p>Findings:</p> <ul style="list-style-type: none"> • The study's findings aligned with previous research, indicating that individuals with higher income, education levels, and employment status tend to have greater financial literacy. • Financial literacy scores were highest among the 35–44 and 45–54 age groups, though only slightly higher than those of other age groups. This minor difference suggests that a larger sample size might be needed to determine if middle-aged women truly have the highest financial literacy. Consequently, the study does not confirm a hump-shaped pattern of financial literacy across age groups, highlighting the need for a more extensive dataset for conclusive results.

Table 5.3.3 Objective 3 Main Findings

Objective 4: To evaluate the financial well-being of women in Malta

Findings:

- The findings reflect an average financial wellbeing score of 63.73%, suggesting moderate financial wellbeing among participants. However, less than 50% of the participants achieved the minimum financial wellbeing score, indicating a significant lack in financial wellbeing.
- Fewer than 14% achieved a perfect score, highlighting that only a limited fraction of participants exhibit ideal financial well-being.
- Participants exhibited a good amount of financial resilience, achieving an average score of 74.18%, indicating that on average, most participants are equipped to manage financial shocks or unexpected expenditures.
- Conversely, the average subjective well-being score is 53.29%, indicating that, individuals may have less satisfaction or security over their overall financial circumstances.
- The study's findings diverged from the OECD report, revealing stronger financial wellbeing among younger participants than expected. Specifically, 26.67% of 18-24-year-olds met the minimum financial wellbeing goal, compared to only 5.71% of those aged 65 and older. The higher financial wellbeing scores among the 18-24 age group may be attributed to their being the largest age group in the sample, while the 65 and older group was the smallest.
- Additionally, 33.33% of those in the highest income bracket reached the minimum financial wellbeing score, indicating a link between higher income and financial wellbeing.
- Furthermore, 73.3% of those who attained the minimum financial wellbeing score have tertiary education, indicating a clear link between higher education and financial literacy.
- The study confirms a correlation between financial literacy and financial wellbeing, as 54.49% of participants meeting the minimum financial literacy benchmark also reached the wellbeing score. This suggests that educational attainment may play a key role in developing skills essential for financial stability, aligning with OECD findings.

Table 5.3.4 Objective 4 Main Findings

Objective 5: To assess how retesting the results helps identify common themes and highlights the main areas where women struggle.
<p>Findings:</p> <ul style="list-style-type: none"> • Many people showed significant gaps in financial knowledge in relation to comprehending compound interest. • Women's financial attitudes were found to be low, with a common "live for today" mentality that restricts long-term financial planning. In fact, although many women have financial products, considerably less have savings, investments, or retirement goods, which begs questions about their future financial stability. This finding aligns with various studies indicating that this mindset contributes to financial challenges in retirement. This lack of attention on future financial planning emphasises a great need of focused financial education to help women's financial well-being and preparation. In fact, the results also highlight how poor subjective financial well-being still is, which emphasises the continuous necessity of encouraging programs that support financial literacy and well-being thus enabling people to make wise and safe financial decisions.

Table 5.3.5 Objective 5 Main Findings

5.4 Limitations of Study

While the OECD provides overall results by gender, it does not offer gender-specific data for individual questions, limiting the ability to make meaningful comparisons. Including such disaggregated data would reveal distinct strengths and areas for improvement between men and women, enabling more targeted educational initiatives and policies. Future surveys should break down all data to provide deeper insights into specific areas where different groups may need support, ultimately promoting a more effective approach to enhancing financial literacy.

A significant limitation was that over 74% of participants had a tertiary education. Hence, the high financial literacy rate found in the survey may be skewed and biased due to a large proportion of highly educated respondents. Therefore, the results found may not be fully representative of Maltese women's financial literacy

The results were compared only with the OECD model because limited time and resources made it difficult to analyse other ways of measuring financial literacy. Therefore, the OECD framework was used as the single model for comparison in this study.

5.5 Recommendations to Practitioners

Recommendation 1: In light of the study's findings indicating that women's financial attitudes are poor, focused initiatives should be implemented to rectify this disparity. There should be initiatives advocating for "responsible saving" to foster long-term financial planning.

Recommendation 2: The study reveals that women have diminished subjective well-being, rendering them suitable participants for targeted financial education programs. Financial education is essential for individuals to comprehend fundamental financial concepts and make well-informed financial decisions (OECD, 2005). Financial education empowers individuals to navigate intricate financial landscapes by providing them with the necessary knowledge and skills to manage their finances effectively. Research indicates that women have favourable responses to customised financial education, frequently altering their behaviours following sessions on retirement planning and savings techniques (Clark et al., 2006; Lusardi, Keller, and Keller, 2009). Therefore, a recommendation is to create financial education programs, but specifically targeting the main issues that women lack knowledge in, like the effects of compound interest and the significance of retirement savings.

Recommendation 3: Financial literacy may also be improved by awareness campaigns, seminars, financial management courses, brief television and radio segments, and social media initiatives.

Recommendation 4: As the financial sector rapidly shifts to digital platforms, digital financial services have become the new normal. The study found that despite the widespread usage of online banking applications, digital financial literacy remains at a moderate level. Consequently,

enhancing knowledge, behaviours, and abilities is vital for promoting the appropriate and secure utilisation of digital financial services. Strategies on how this could be achieved include the simplification of terms and conditions to enhance user-friendliness, especially in explaining risks, potential fees, and data privacy. Automated password reminders can encourage regular password upgrades, hence enhancing account security.

Recommendation 5: Furthermore, regular webinars can enhance comprehension, enabling consumers to make educated decisions and nurture digital financial resilience. Educational programs aimed at identifying prevalent fraud strategies, along with continuous updates on developing scams, can significantly diminish the number of individuals falling victims to fraud and scams.

5.6 Suggestions for Further Research

Despite the fact that the study did not allow "I don't know" responses, two participants still responded in this manner in open-ended questions. This highlights an intriguing subject matter for future research on financial literacy and confidence amongst Maltese nationals. Prior research has suggested that women frequently exhibit lower levels of financial literacy confidence, frequently responding "I don't know" despite having more knowledge than they perceive (Barber and Odean, 2001, Beyer, 1990, Bucher-Koenen et al., 2017; Chen and Volpe, 2002; Dahlbom et al., 2011, de Bassa Scheresberg, 2013; Lusardi and Mitchell, 2011; Klapper, Lusardi, and Van Oudheusden, 2015). Valuable insights could be obtained by investigating the relationship between knowledge and confidence in financial decision-making within Malta, with a particular emphasis on the gender confidence divide. A potential research question could be: 'Exploring the Gender Confidence Gap in Financial Literacy: A Study of Actual Knowledge and Lack of Confidence in the Maltese Context'.

Malta has not yet investigated financial literacy practices in relation to using independent or non-independent sources of advice. Research in this area might help one understand the

relationship, if any, between seeking advice regarding financial matters affects financial literacy levels in Malta. A potential research question could be: 'How does the use of independent rather than non-independent sources for financial advice impact financial literacy levels among individuals in Malta?'

The findings highlight a significant gap between women's current financial attitudes and their preparedness for long-term financial stability. The "live for today" mentality that is widespread among women can restrict their ability to plan for the future and hence, result in financial instability in retirement. By investigating customised financial literacy programs, it may be possible to determine whether they can effectively alter attitudes towards future-oriented financial planning, enhance subjective financial well-being, and facilitate decision-making that promotes long-term financial stability. Furthermore, this research has the potential to assist in the creation of personalised financial education interventions that are designed to address these particular obstacles and promote a financially secure future for women. A potential research question could be: 'How do tailored financial literacy programs influence women's attitudes toward long-term financial planning?'

Given that this study is the first attempt to evaluate digital financial literacy in Malta, digital literacy also became clear as a major subject for more research. In further studies, increasing the sample size might help to provide a more complete picture of the digital financial literacy.

The study revealed that the majority of participants possess a comprehensive understanding of traditional financial products, including savings accounts, shares and bonds. This discovery implies that future research could be effective if directed towards alternative financial products, including ETFs, mutual funds, and private equity, in order to evaluate the public's awareness and ownership of these more intricate alternatives. Researchers can evaluate the existence of a knowledge divide. Additionally, more awareness of such products could lead to greater holding and in turn, potential for enhanced wealth maximisation strategies and diversified investment

portfolios. It is crucial to provide individuals with the knowledge and tools needed to understand and effectively navigate the rise of innovative financial solutions, such as cryptocurrencies. Educating individuals about these methods not only broadens their financial opportunities but also enables them to make informed decisions that may be more in line with their personal requirements and objectives. This area would be an excellent focus for future research, as gaining deeper insights into the barriers to adoption and the knowledge gaps could help shape more effective educational strategies and promote wider understanding and usage of alternative financial methods.

5.7 Conclusion

In conclusion, although a surface-level examination might suggest that financial literacy among women is relatively strong, it is essential to delve deeper into the specific components of this literacy to identify where gaps or deficiencies may exist. It is essential to understand these areas that require refinement, as financial literacy incorporates a variety of skills that enable individuals to make informed financial decisions, in addition to basic knowledge. Not only does the enhancement of these competencies enhance personal financial well-being, but it also contributes to further economic stability. By addressing these disparities, a more financially resilient society could be fostered, in which individuals are better prepared to navigate intricate financial landscapes.

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Appendix A - The 'Big Three' Questions for Measuring Financial Literacy

These 'Big Three' Questions were developed by Lusardi and Mitchell (2011) to measure financial literacy

Question 1 – Understanding of interest compounding

Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow ?

- More than \$102
- Exactly \$102
- Less than \$102
- Do not know
- Refuse to answer

Question 2 – Understanding of inflation

Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account ?

- More than today
- Exactly the same
- Less than today
- Do not know
- Refuse to answer

Question 3 – Understanding of risk-diversification

Please tell me whether this statement is true or false. 'Buying a single company's stock usually provides a safer return than a stock mutual fund'.

- True
- False
- Do not know
- Refuse to answer

Appendix B - The Semi-Structured Questionnaire

An analysis: Financial Literacy amongst Women in Malta

Dear Participant,

My name is Mireille Filletti. I am currently reading for a Master's degree in Banking, Investments & Finance at the University of Malta. I sincerely appreciate you taking the time to participate in this survey. The purpose of this survey is to measure the financial literacy of Maltese women in a way which is internationally comparable. Your valuable input will help me analyse trends and perspectives, which in turn can offer insights into addressing and improving financial literacy amongst women.

Confidentiality

The survey is completely anonymous and does not request any personal information such as name and/or address. Your responses will remain strictly confidential, and it will not be possible to identify you from the data provided. Therefore, please feel free to answer openly. The findings will be presented in aggregate form and will not be shared with any third parties.

Instructions

Please read each question carefully and choose the response that best reflects your thoughts, feelings, and behaviours. There are no right or wrong answers, so please respond truthfully and to the best of your ability.

Duration

Your participation is entirely voluntary, and you may withdraw from the survey at any point. The questionnaire should not take longer than 10 minutes to complete. Please fill it out when you are comfortable and aim to answer as accurately as possible.

Consent

By completing the questions set out hereafter, you are giving your consent to participate in this research.

Contact Information

If you face any queries whilst completing this questionnaire, please feel free to contact me on mireille.filletti.20@um.edu.mt

I hope you find the questionnaire interesting and engaging. I sincerely thank you once again for your time and assistance.

1. I hereby confirm that I am a woman of Maltese nationality and 18 years of age or older.

I confirm

I do not confirm

Section 1 - Financial Knowledge

2. Five brothers are going to be given a gift of €1,000 in total to share between them.

Now imagine that the brothers have to wait for one year to get their share of the €1,000 and inflation stays at 2.3% percent. In one year's time will they be able to buy:

More with their share of the money than they could today

The same amount; or

Less than they could buy today

3. You lend €25 to a friend one evening and he gives you €25 back the next day.
How much interest has he paid on this loan?

4. Imagine that someone put €100 into a tax-free savings account with a guaranteed interest rate of 2% per year. They don't make any further payments into this account, and they don't withdraw any money. How much would be in the account at the end of the first year once the interest payment is made?

5. How much would be in the account at the end of five years?

- More than €110
- Exactly €110
- Less than €110
- Impossible to tell from the information given

6. Kindly answer true or false to these statements.

	True	False
An investment with a high return is likely to be high risk.		
High inflation means that the cost of living is increasing rapidly		
It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares.		

Section 2 - Financial Attitudes

7. How much do you agree or disagree with these statements?

	Completely Agree	Agree	Neutral	Disagree	Completely Disagree
I find it more satisfying to spend money than to save it for the long term.					
I tend to live for today and let tomorrow take care of itself.					
Money is there to be spent.					

Section 4: Financial Behaviour

8. Who is responsible for making day-to-day decisions about money in your household?

- You make these decisions by yourself
- You make these decisions with someone else
- Someone else makes these decisions

9. Do you make day-to-day decisions about your own money

- Yes
- No

10. **Do you do any of the following for yourself or for your household?**

- Make a plan to manage your income and expenses
- Keep a note of your spending
- Keep money for bills separate from day-to-day spending money
- Make a note of upcoming bills to make sure you don't miss them
- Use a banking app or money management tool to keep track of your outgoings
- Arrange automatic payments for regular outgoings
- I don't do any of the above

11. **In the past 12 months have you been personally saving money in any of the following ways, whether or not you still have the money? Please don't take into account any money paid into a pension, but think about all kinds of savings, such as building up a rainy-day fund or putting money aside for a special occasion.**

- Saving cash at home or in your wallet
- Paying money into a savings/deposit account
- Giving money to family to save on your behalf
- Saving in an informal savings club
- Buying bonds or time deposits
- Investing in crypto-assets
- Investing in stocks and shares

- Saving or investing in some other way, other than a pension

12. Kindly answer yes or no to these statements.

	Yes	No
I keep a close watch on my personal financial affairs.		
I set long term financial goals and strive to achieve them.		
Before I buy something I carefully consider if I can afford it.		
I pay my bills on time.		

13. Sometimes people find that their income does not quite cover their living expenses. In the last 12 months, has this happened to you personally?

- Yes
- No

14. If yes, what did you do to make ends meet the last time this happened?

- Drew from existing resources (i.e., savings)
- Drew from additional resources
- Accessed credit by using exiting contacts or resources
- Borrowed from existing credit line
- Accessed additional credit
- Fell behind/ went beyond arranged amount

N/A because I answered no in the question above

15. Kindly answer true or false to these statements.

	True	False
A digital financial contract requires signature of a paper contract to be considered valid.		
The personal data that I share publicly online may be used to target me with personalised commercial or financial offers.		
Crypto-currencies have the same legal tender as banknotes and coins.		

16. How much do you agree or disagree with these statements?

	Completely Agree	Agree	Neutral	Disagree	Completely Disagree
I share the passwords and PINs of my bank account with close friends.					
Before buying a financial product online I check if the provider is regulated in my country.					

I share information about my personal finances publicly online (e.g., on social media).					
I regularly change the passwords on websites that I use for online shopping and personal finance.					
I think that it is safe to shop online using public Wi-Fi networks.					
It is important to pay attention to the security of a website before making a transaction online.					
I think it is not important to read the terms and conditions when buying something online.					

Section 6: Financial Well-being

17. Kindly answer yes or no to these statements.

	Yes	No
If you, personally, faced a major expense today – equivalent to your own monthly income – would you be able to pay it without borrowing the money or asking family or friends to help?		

Sometimes people find that their income does not quite cover their living expenses. In the last 12 months, has this personally happened to you?		
I have money left over at the end of the month.		
I am satisfied with my present financial situation.		

18. If you lost your main source of income today, how long could you continue to cover your living expenses, without borrowing any money or moving house?

- Less than a week
- At least a week, but not one month
- At least one month, but not three months
- At least three months, but not six months
- Six months or more

19. How much do you agree or disagree with these statements?

	Completely Agree	Agree	Neutral	Disagree	Completely Disagree
My financial situation limits my ability to do the things that are important to me.					

I have too much debt right now.					
I tend to worry about paying my normal living expenses.					
My finances control my life.					
Because of my money situation, I feel like I will never have the things I want in life.					
I am concerned that my money won't last.					
I am just getting by financially.					

20. Please can you tell me whether you have heard of any of these types of financial products?

- A credit card
- A current checking/payment account
- Mobile/cell phone payment account
- A prepaid debit card/ payment card

I have never heard of any of these products

21. Do you currently hold any of these types of products?

A credit card

A current checking/payment account

Mobile/cell phone payment account

A prepaid debit card/ payment card

I don't hold any of these products

22. Please can you tell me whether you have heard of any of these types of financial products?

A pension or retirement product

An investment account

A savings account

Stocks and shares

Bonds

Crypto-assets

I have never heard of any of these products

23. Do you currently hold any of these types of products?

- A pension or retirement product
- An investment account
- A savings account
- Stocks and shares
- Bonds
- Crypto-assets
- I don't hold any of these products

24. Please can you tell me whether you have heard of any of these types of financial products

- A mortgage or home-loan
- A loan secured on property
- An unsecured bank loan
- A car loan
- A credit card
- A microfinance loan
- I have never heard of any of these products

25. Do you currently hold any of these types of products?

- A mortgage or home-loan

- A loan secured on property
- An unsecured bank loan
- A car loan A credit card
- A microfinance loan
- I don't hold any of these products

Financial Fraud and Scam

26. Have you ever been a victim of either of the following frauds and scams?

- Have you accepted advice to invest in a financial product that you later found to be a scam, such as a pyramid scheme?
- Have you accidentally provided personal financial information (such as passwords or card number) in response to an email, phone call or social media message that your later found out was not genuine?
- Have you discovered that someone has used your card details to pay for goods without your authorisation? Have you lost money as a result of hackers or phishing scams?
- I have never been a victim of either of the above frauds and scams

Digital Financial Services

27. How frequently do you do the following?

	Never	Sometimes	Often	Very Often
--	--------------	------------------	--------------	-----------------------

In the last 12 months, how often have you managed financial products and services (such as savings, investments, credit, insurance) online?				
---	--	--	--	--

Demographics

28. Age

- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 and more

29. What is the highest level of education that you have completed?

- Doctorate
- Master's Degree
- Bachelor's Degree
- Diploma
- Advanced Matriculation Certificate (A-Levels & Intermediates)

Ordinary Matriculation Certificate (O-Levels)

30. What is your employment status?

Employed

Unemployed but looking for work

Unemployed and not looking for work

Student

Retired

Unable to work due to sickness

31. Could you tell me which of these categories your household monthly income after tax deduction usually falls into?

Up to €855 a month

Between €856 and €1,223 a month

Between €1,224 and €3,131 a month

€3,132 or more a month

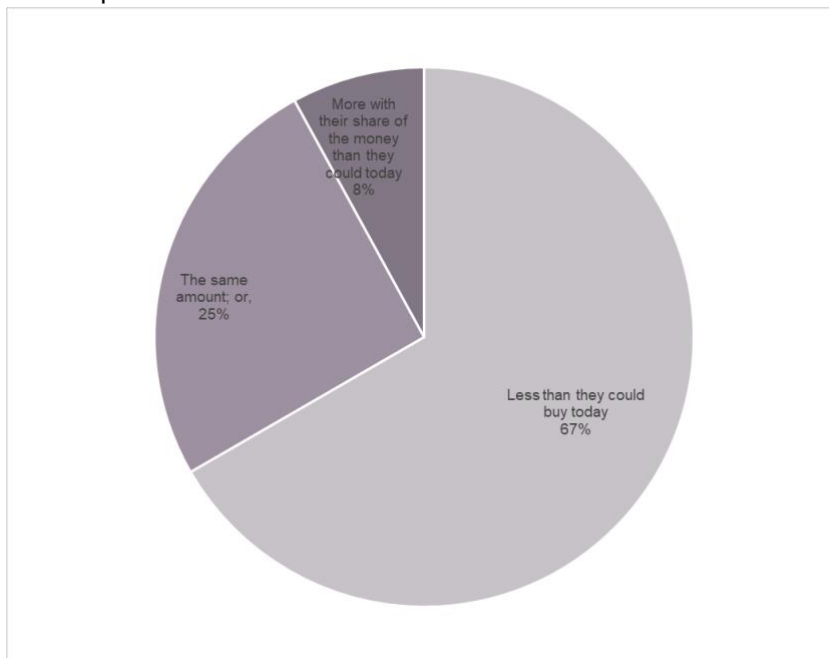
Prefer not to say

Appendix C: Analysis of Individual Questionnaire Questions

Section 1: Financial Knowledge Questions

1.1 Time value of money

The majority, 66.67%, responded that the brothers would be able to buy "less than they could buy today", whilst 25.35% answered "the same amount," and 7.98% chose "More with their share of the money than they could today", indicating that most participants were quite divided on this question.



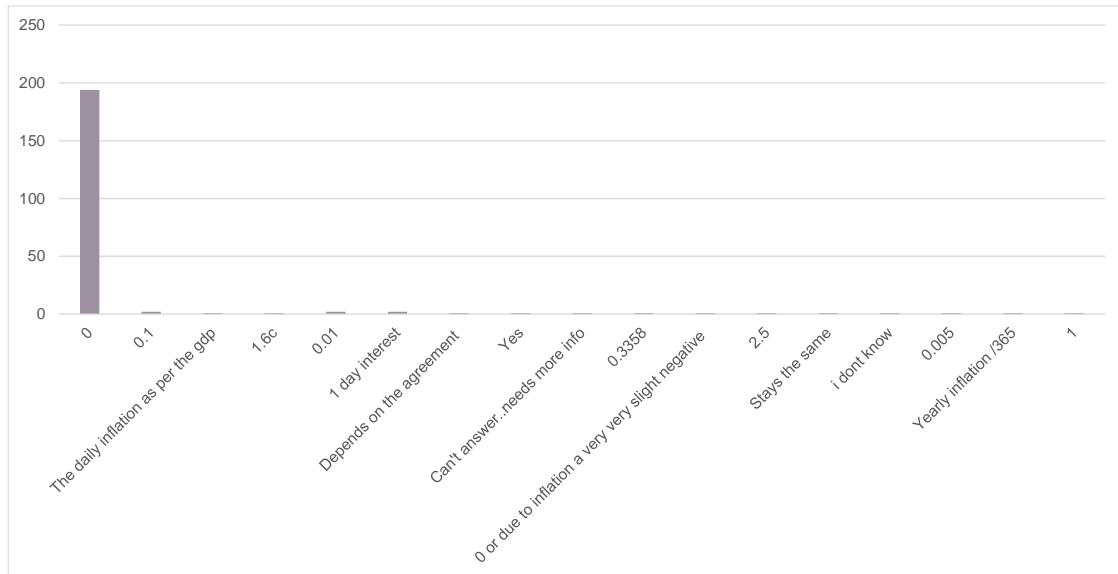
Participants knowledge on the time value of money concept

	Frequency	Percentage
Five brothers are going to be given a gift of €1,000 in total to share between them. Now imagine that the brothers have to wait for one year to get their share of the €1,000 and inflation stays at 2.3% percent. In one year's time will they be able to buy:		
Less than they could buy today	142	66.67
The same amount; or	54	25.35
More with their share of the money than they could today	17	7.98
Total	213	100.00

Participants knowledge on the time value of money concept

1.2 Interest on a loan

91.08% of participants responded that the interest paid on the loan was "0". Given this was an open-ended question, there were various answers were given, though each by only a small number of participants.



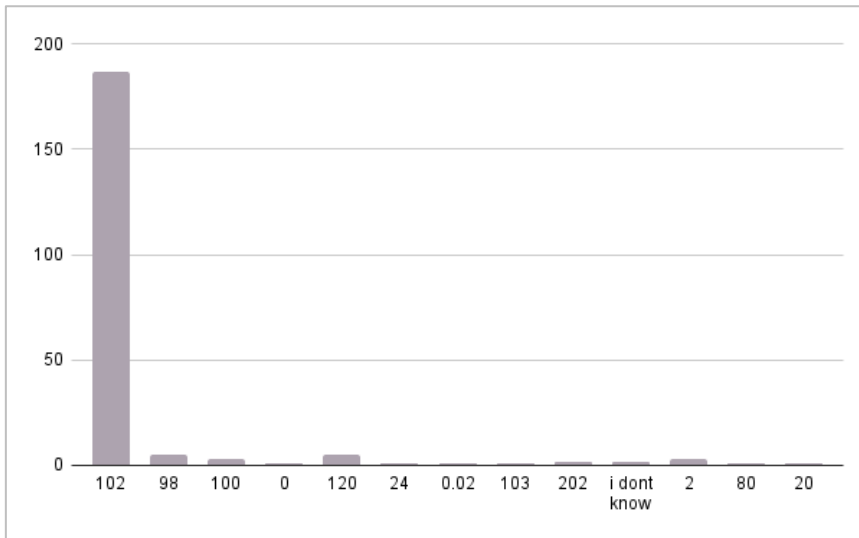
Participants knowledge on interest

	Frequency	Percentage
0	194	91.08
0.1	2	0.94
The daily inflation as per the gdp	1	0.47
1.6c	1	0.47
0.01	2	0.94
1 day interest	2	0.94
Depends on the agreement	1	0.47
Yes	1	0.47
Can't answer...needs more info	1	0.47
0.3358	1	0.47
0 or due to inflation a very very slight negative	1	0.47
2.5	1	0.47
Stays the same	1	0.47
i dont know	1	0.47
0.005	1	0.47
Yearly inflation /365	1	0.47
1	1	0.47
Total	213	100.00

Participants knowledge on interest

1.3 Simple interest calculation

The data shows that most participants, 87.79%, correctly answered "102", indicating strong understanding of basic interest calculation. However, given this was an open-ended question, some participants provided incorrect answers like "98," "120," and even "0," highlighting gaps in financial literacy within the sample.



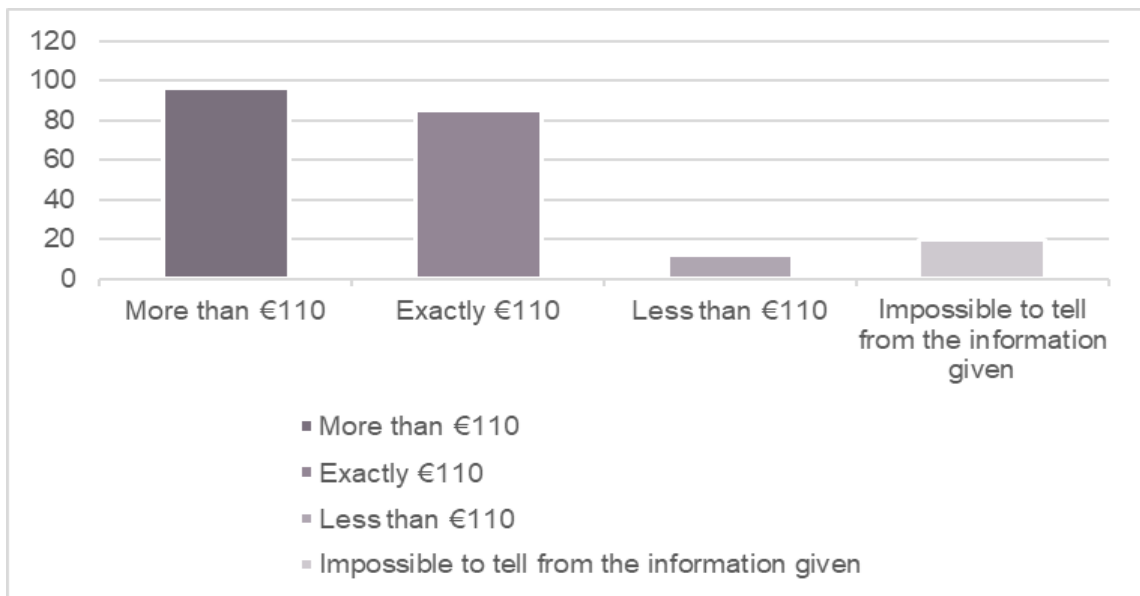
Participants knowledge on simple interest calculations

	Frequency	Percentage	
Imagine that someone put €100 into a tax-free savings account with a guaranteed interest rate of 2% per year. They don't make any further payments into this account, and they don't withdraw any money. How much would be in the account at the end of the first year once the interest payment is made?	102	187	87.79
	98	5	2.35
	100	3	1.41
	0	1	0.47
	120	5	2.35
	24	1	0.47
	0.02	1	0.47
	103	1	0.47
	202	2	0.94
	i dont know	2	0.94
	2	3	1.41
	80	1	0.47
	20	1	0.47
	Total	213	100

Participants knowledge on simple interest calculations

1.4 Compound Interest Calculation

Participants were very divided when it came to the compound interest calculation, as 45.07% participants answered "More than €110" whilst 39.91%, replied 'Exactly €110'. Hence, the difference between the answers was merely of 5.16%. In contrast, the least frequent response, at 5.63%, was 'Less than €110'.



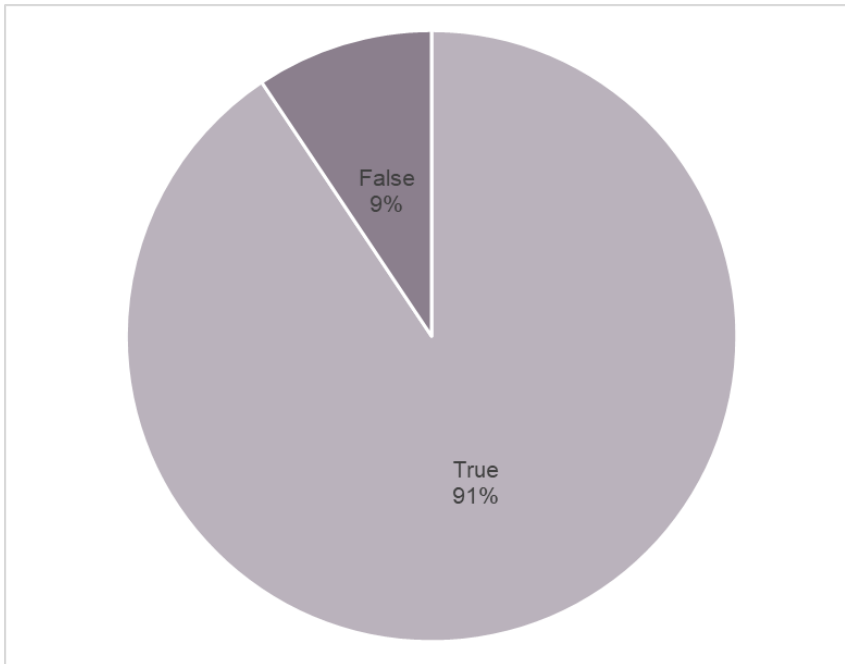
Participants knowledge on compound interest calculations

How much would be in the account at the end of five years?		Frequency	Percentage
	More than €110	96	45.07
	Exactly €110	85	39.91
	Less than €110	12	5.63
	Impossible to tell from the information given	20	9.39
Total	213	100.0000	

Participants knowledge on compound interest calculations

1.5 Risk on return

90.61% of respondents stated that the statement "High inflation means that the cost of living is rising quickly" was true, while only 9.39% stated it was false.



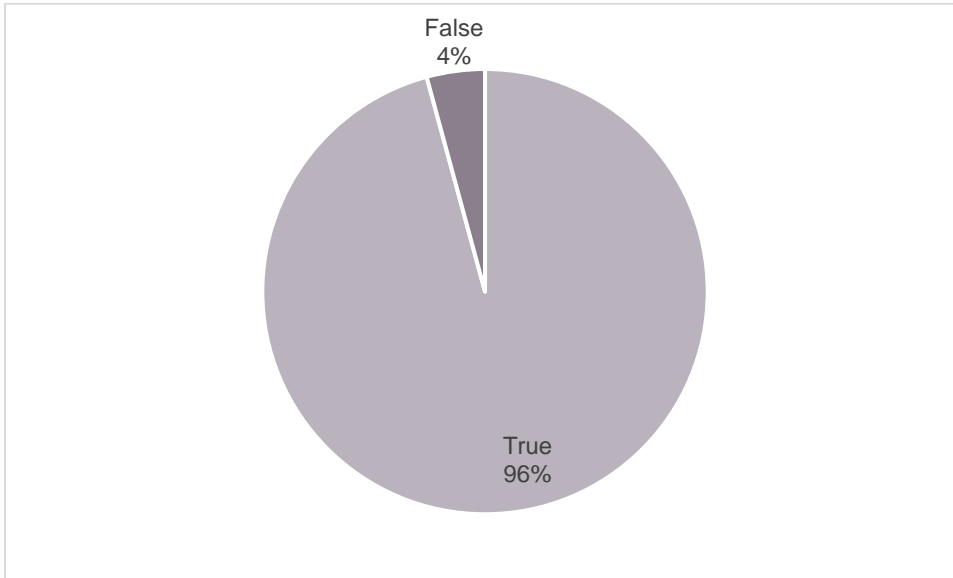
Participants knowledge on risk and return

An investment with a high return is likely to be high risk.	Frequency		Percentage	
	True	193	90.61	
False	20	9.39		
Total	213	100		

Participants knowledge on risk and return

1.6 Definition of inflation

95.77% of respondents indicated the statement "High inflation means that the cost of living is rising quickly" as true, whilst only 4.23% marked the statement as False.



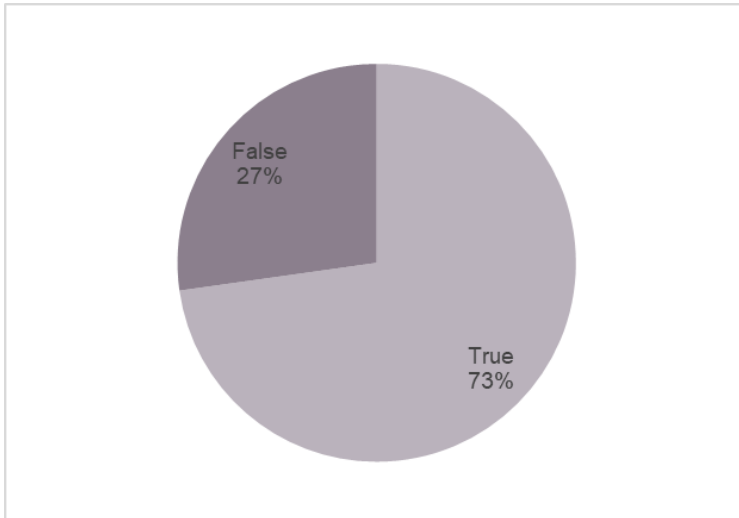
Participants knowledge on inflation

High inflation means that the cost of living is increasing rapidly.		Frequency	Percentage
	True	204	95.77
	False	9	4.23
	Total	213	100.00

Participants knowledge on inflation

1.7 Risk Diversification

72.77% of participants indicated that the statement "diversifying investments by purchasing a variety of stocks and shares typically reduces risk" was true, while 27.23% indicated that it was false.



Participants knowledge on risk diversification

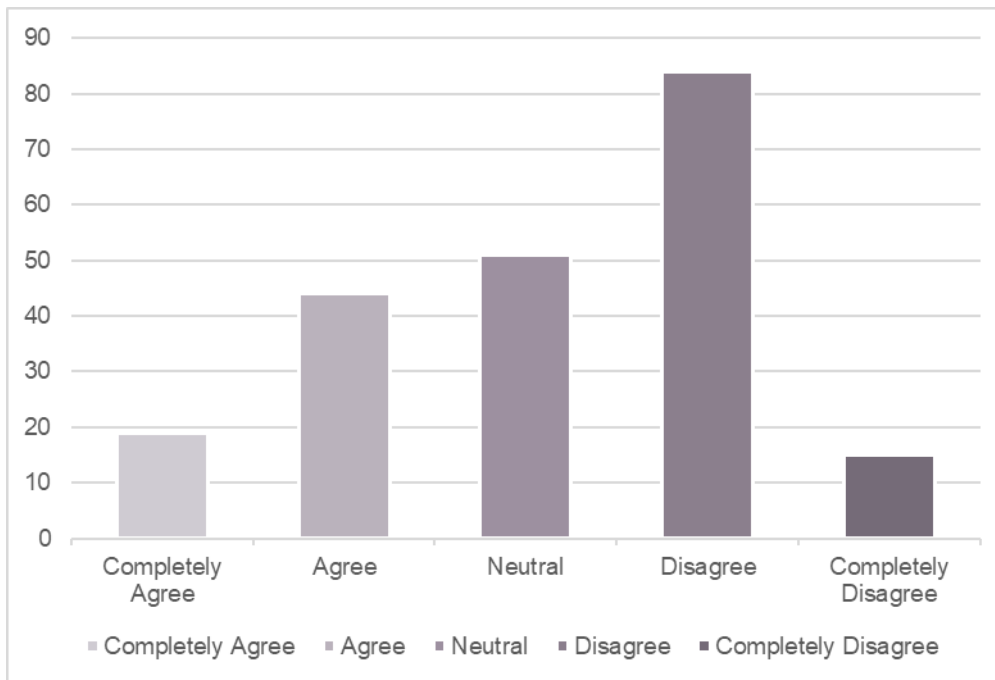
It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares.		
	Frequency	Percentage
True	155	72.77
False	58	27.23
Total	213	100

Participants knowledge on risk diversification

Section 2 – Financial Attitudes Questions

2.1 Spending vs. Saving Satisfaction

The most common response, chosen by 39.44% of participants, was "Disagree," indicating that the majority do not find spending money more satisfying than saving it for the long term. In contrast, the least common response, selected by only 7.04%, was "Completely Disagree," showing that very few participants strongly opposed the idea of saving over spending. A significant portion of respondents, 23.94%, indicated that they are neutral, hence, neither agreeing nor disagreeing with the statement.



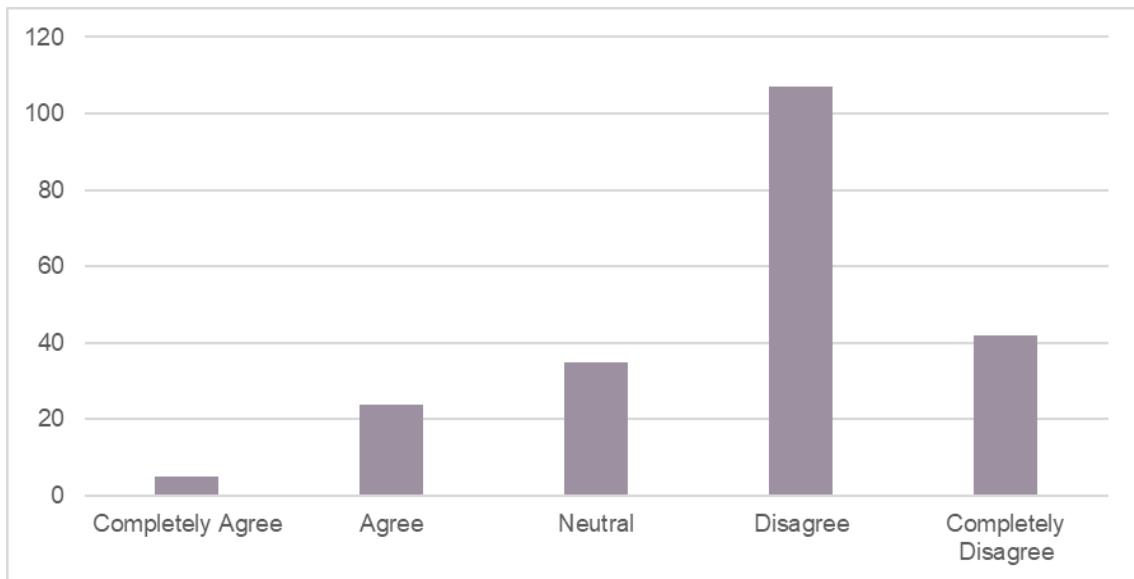
Participants attitude towards spending vs savings

I find it more satisfying to spend money than to save it for the long term.		Frequency	Percentage
	Completely Agree	19	8.92
	Agree	44	20.66
	Neutral	51	23.94
	Disagree	84	39.44
	Completely Disagree	15	7.04
Total	213	100.00	

Participants attitude towards spending vs savings

2.2 Short-Term Mindset in Financial Decisions

50.23% of respondents selected "Disagree" in response to the statement "I tend to live for today and let tomorrow take care of itself," making it the most chosen option. The least selected response was "Completely Agree," chosen by only 2.35% of participants.



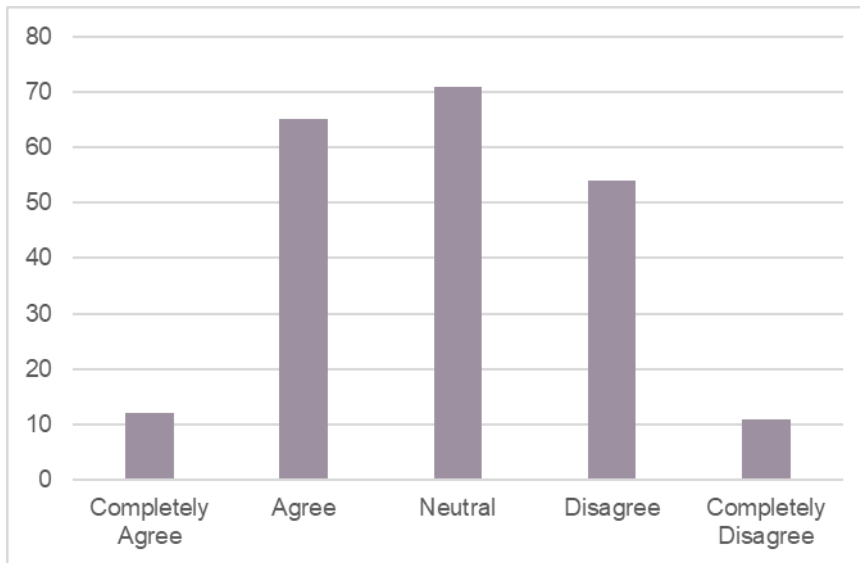
Participants attitudes towards short-term vs long-term

I tend to live for today and let tomorrow take care of itself.		Frequency	Percentage
	Completely Agree	5	2.35
	Agree	24	11.27
	Neutral	35	16.43
	Disagree	107	50.23
	Completely Disagree	42	19.72
	Total	213	100.00

Participants attitudes towards short-term vs long-term

2.3 Perception of Money's Purpose

Figure 2.3 clearly depicts that the respondents' opinions are quite divided. While the most common answer was neutral, with 33.33% of respondents essentially neither agreeing nor disagreeing to statement, the responses were closely followed by those who agreed (30.52%) and those who disagreed (25.35). This suggests that, despite the fact that a significant number of individuals are still undecided, there is a nearly equal divide between those who support the statement and those who oppose it, demonstrating the absence of a strong consensus.



Participants attitudes towards the perception of money

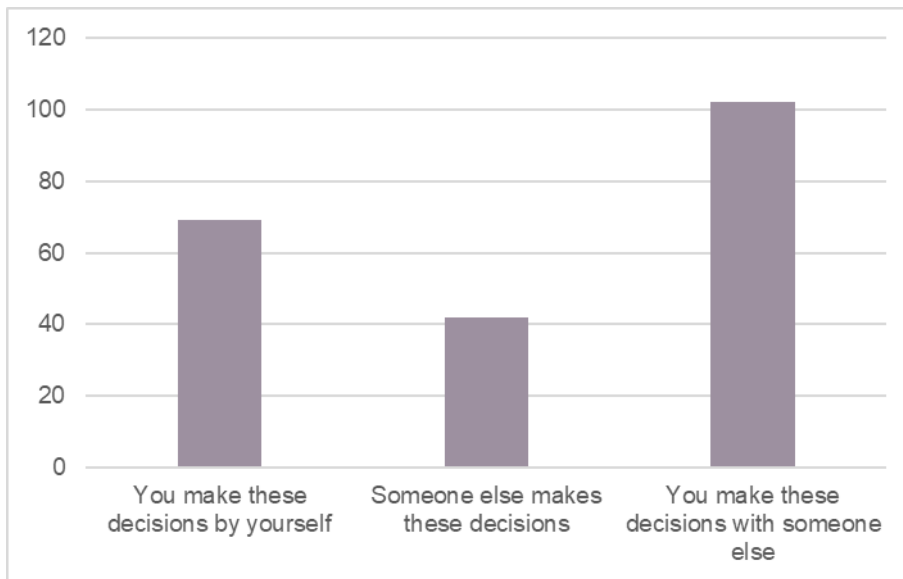
Money is there to be spent		Frequency	Percentage
	Completely Agree	12	5.63
	Agree	65	30.52
	Neutral	71	33.33
	Disagree	54	25.35
	Completely Disagree	11	5.16
Total	213	100.00	

Participants attitudes towards the perception of money

Section 3 – Financial Behaviour Questions

3.1 Money tracking in the short term

When it comes to financial decision-making in the household, the figure and table below show that 47.89% of participants share this responsibility with someone else, making it the most frequent answer, while 19.72% indicated that someone else makes the decisions, the least frequent response.



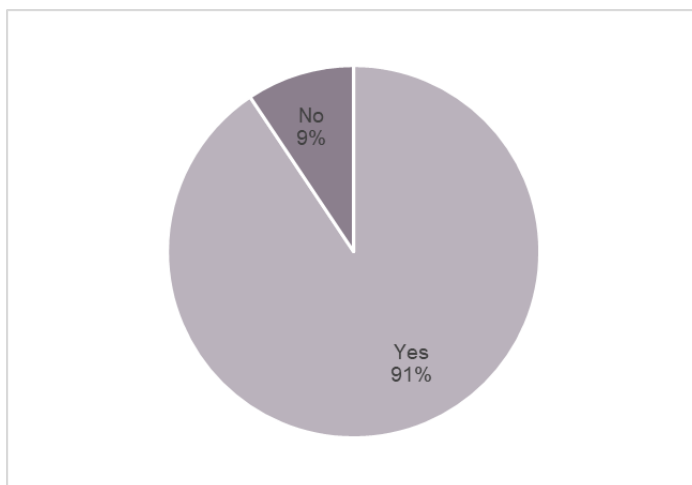
Participants behaviour towards the tracking of money in the short term

Who is responsible for making day-to-day decisions about money in your household?	Frequency	Percentage	
	You make these decisions by yourself	69	32.39
	Someone else makes these decisions	42	19.72
	You make these decisions with someone else	102	47.89
Total	213	100.00	

Participants behaviour towards the tracking of money in the short term

3.2 Money tracking in the short term

In this question, the vast majority (90.61%) indicated that they handled their own day-to-day financial decisions, while just 9.39% responded with "No".



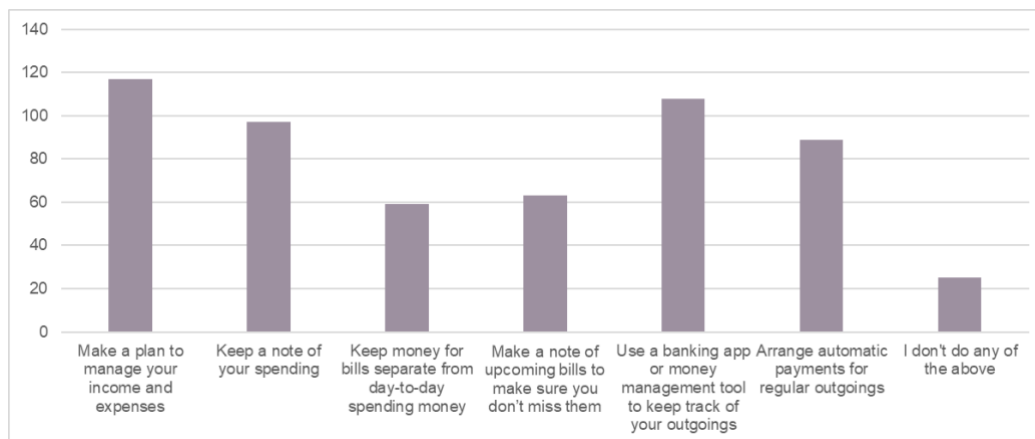
Participants behaviour towards the tracking of money in the short term

Do you make day-to-day decisions about your own money?	Frequency	Percentage
Yes	193	90.61
No	20	9.39
Total	213	100.00

Participants behaviour towards the tracking of money in the short term

3.3 Money tracking in the short term

The most common method for managing finances was making a plan to manage income and expenses (20.97%), closely followed by use a banking app or money management tool to keep track of your outgoings (19.35%), keep not of your spending (17.38%) and arrange automatic payments for regular outgoings (15.95%), whereas the least common was not engaging in any listed activities (4.48%).



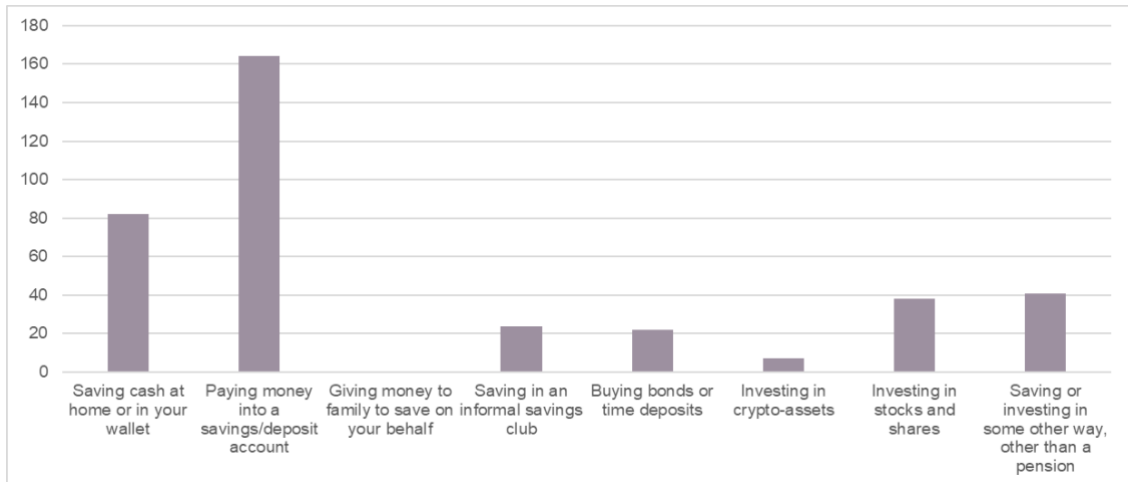
Participants behaviour towards the tracking of money in the short term

Do you do any of the following for yourself or for your household?	Frequency	Percentage
	Make a plan to manage your income and expenses	117
Keep a note of your spending	97	17.38
Keep money for bills separate from day-to-day spending money	59	10.57
Make a note of upcoming bills to make sure you don't miss them	63	11.29
Use a banking app or money management tool to keep track of your outgoings	108	19.35
Arrange automatic payments for regular outgoings	89	15.95
I don't do any of the above	25	4.48
Total	558	100.00

Participants behaviour towards the tracking of money in the short term

3.4 Actively Saving

In terms of saving habits, paying money into a savings or deposit account was the most frequent method (43.39%), while no participants (0%) gave money to family to save on their behalf.



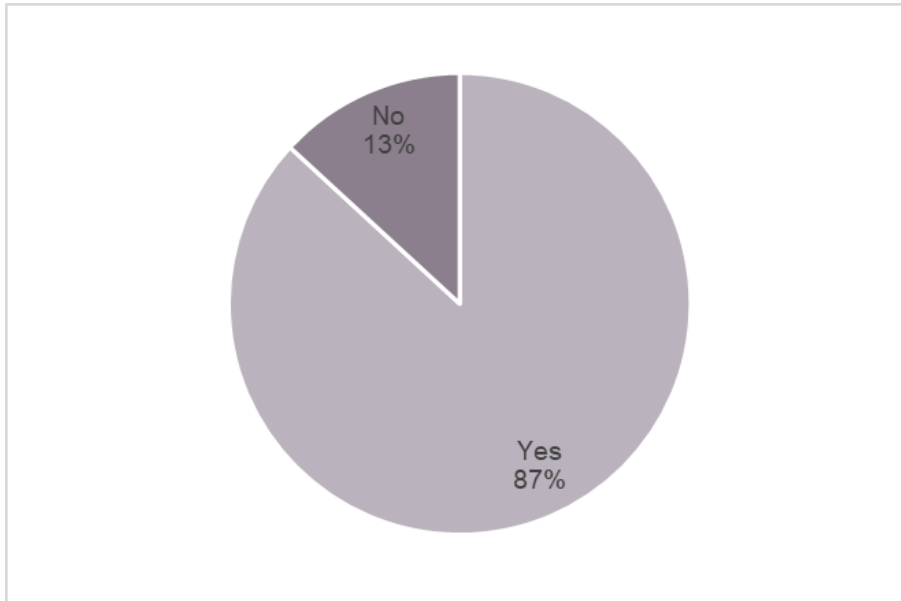
Participants behaviour towards actively saving

	Frequency	Percentage
<p>In the past 12 months have you been personally saving money in any of the following ways, whether or not you still have the money? Please don't take into account any money paid into a pension, but think about all kinds of savings, such as building up a rainy-day fund or putting money aside for a special occasion.</p>	Saving cash at home or in your wallet	82 21.69
	Paying money into a savings/deposit account	164 43.39
	Giving money to family to save on your behalf	0 0.00
	Saving in an informal savings club	24 6.35
	Buying bonds or time deposits	22 5.82
	Investing in crypto-assets	7 1.85
	Investing in stocks and shares	38 10.05
	Saving or investing in some other way, other than a pension	41 10.85
	Total	378 100

Participants behaviour towards actively saving

3.5 Close watch on personal financial affairs

A large portion (86.85%) of respondents reported keeping a close watch on their finances, while only 13.15% did not.



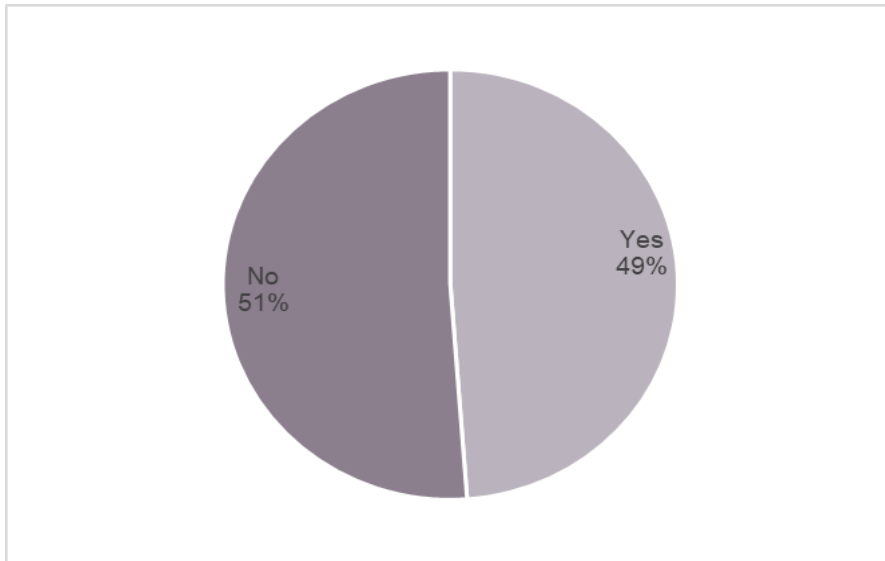
Participants behaviour towards personal financial affairs

I keep a close watch on my personal financial affairs.	Frequency	Percentage
	Yes	185
No	28	13.15
Total	213	100.00

Participants behaviour towards personal financial affairs

3.6 Setting long-term financial goal

The figure below reveals an almost even split in the responses regarding setting long-term financial goals. The majority, 51.17%, indicated that they do not set long-term financial goals, making it the most common response. However, a close 48.83% of participants stated that they do, highlighting that nearly half of the respondents take the opposite approach. This close distribution shows that opinions on this matter are quite divided, with no significant majority leaning strongly in either direction.



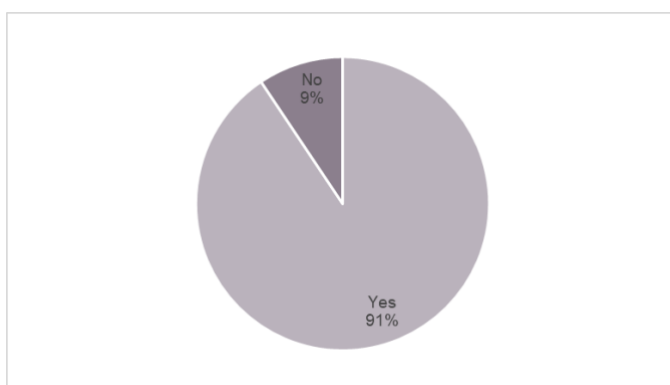
Participants behaviours towards setting long-term financial goals

I set long term financial goals and strive to achieve them.	Frequency	Percentage
Yes	104	48.83
No	109	51.17
Total	213	100.00

Participants behaviours towards setting long-term financial goals

3.7 Making Considered Purchases

The Figure illustrates participants' financial considerations before making a purchase. It is clear that the vast majority (91%) of respondents took their financial situation into account before buying something.



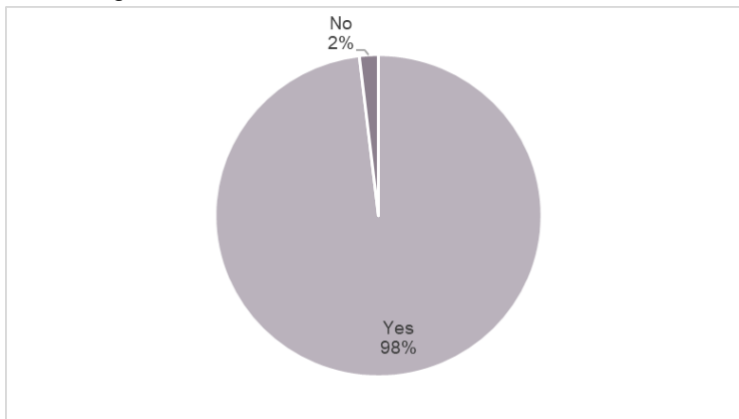
Participants behaviours towards making considered purchases

		Frequency	Percentage
Before I buy something I carefully consider if I can afford it.	Yes	193	90.61
	No	20	9.39
	Total	213	100.00

Participants behaviours towards making considered purchases

3.8 Paying of bills on time

A near unanimous 98.12% of participants reported paying their bills on time, with only 1.88% answering "No."



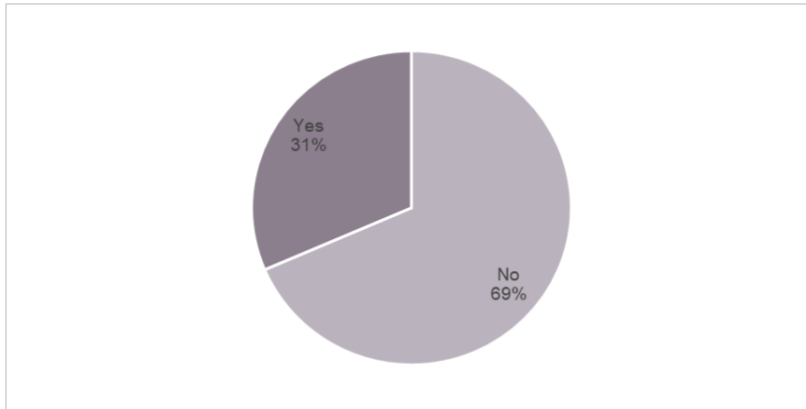
Participants behaviours towards paying bills on time

		Frequency	Percentage
I pay my bills on time.	Yes	209	98.12
	No	4	1.88
	Total	213	100.00

Participants behaviours towards paying bills on time

3.9 Making ends meet

In this question, participants were asked whether their income had covered their living expenses over the past year. 68.54% reported never having faced this issue, while the remaining 31.46% indicated that they had experienced difficulties.



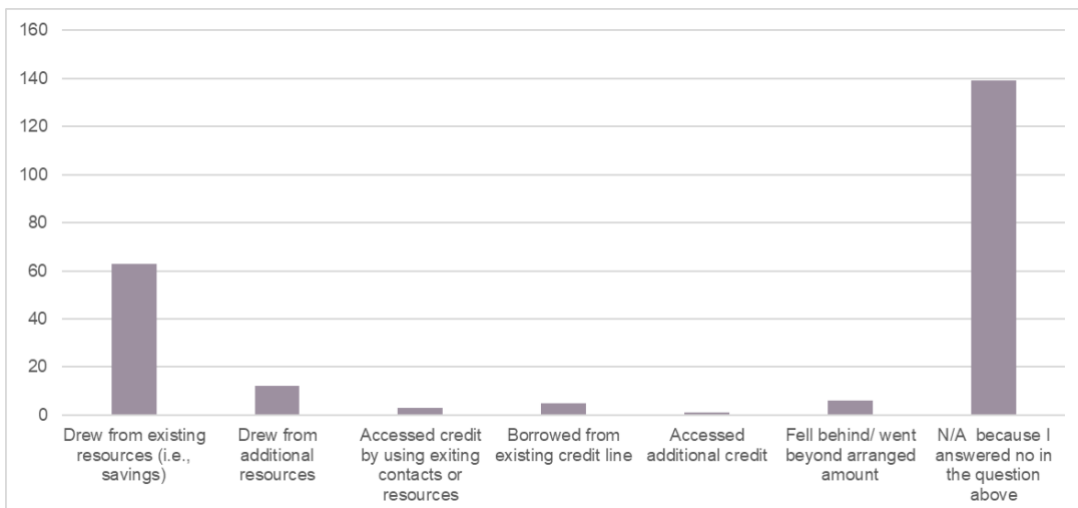
Participants behaviour towards borrowing and making ends meet

Sometimes people find that their income does not quite cover their living expenses. In the last 12 months, has this happened to you personally?	Frequency	Percentage
	No	146
Yes	67	31.46
Total	213	100.00

Participants behaviour towards borrowing and making ends meet

3.10 Making ends meet

For those who answered "yes" to the previous question, the most common way of managing financial shortfalls was withdrawing money from existing resources, chosen by 27.51% of respondents. The least common approach was accessing additional credit, selected by only 0.44%.



Participants behaviour towards borrowing and making ends meet

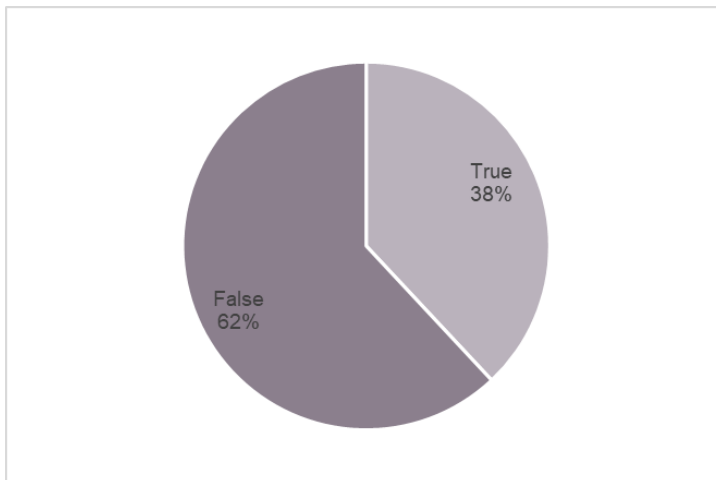
If yes, what did you do to make ends meet the last time this happened?	Frequency	Percentage
	Drew from existing resources (i.e., savings)	63
Drew from additional resources	12	5.24
Accessed credit by using exiting contacts or resources	3	1.31
Borrowed from existing credit line	5	2.18
Accessed additional credit	1	0.44
Fell behind/ went beyond arranged amount	6	2.62
N/A because I answered no in the question above	139	60.70
Total	229	100.00

Participants behaviour towards borrowing and making ends meet

Section 4 - Digital Financial Knowledge

4.1 Validity of Digital Financial Contracts

For the first question of this section, the participants were tested on their knowledge on Digital financial contracts. The vast majority of the respondents (61.97%) disagreed that a digital financial contract requires a paper signature, while 38.03% agreed.



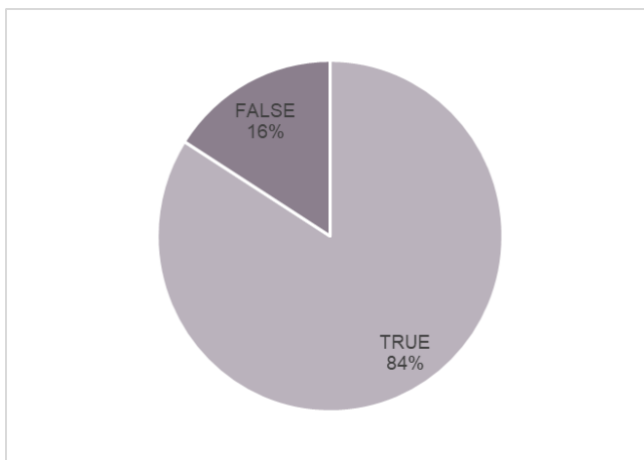
Participants knowledge on Digital Financial Contracts

A digital financial contract requires signature of a paper contract to be considered valid.		Frequency	Percentage
	True	81	38.03
	False	132	61.97
	Total	213	100.00

Participants knowledge on Digital Financial Contracts

4.2 Use of Publicly Shared Personal Data

The statement regarding personal data being used to target individuals with offers was considered true by 84.04% of participants, whilst only 15.96% considered it false.



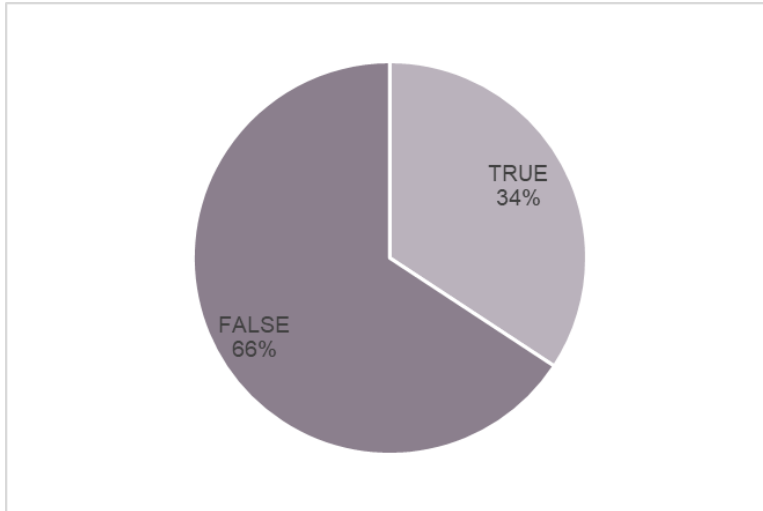
Participants knowledge on the use of publicly shared personal data

The personal data that I share publicly online may be used to target me with personalised commercial or financial offers.		Frequency	Percentage
	TRUE	179	84.04
	FALSE	34	15.96
	Total	213	100.00

Participants knowledge on the use of publicly shared personal data

4.3 Legal Tender Status of Crypto-Currencies

The Figure illustrates that 65.73% of respondents indicated that the statement about cryptocurrencies not having the same legal tender as banknotes and coins is false, while 34.27% believed it to be true.



Participants knowledge on the legal tender status of crypto-currencies

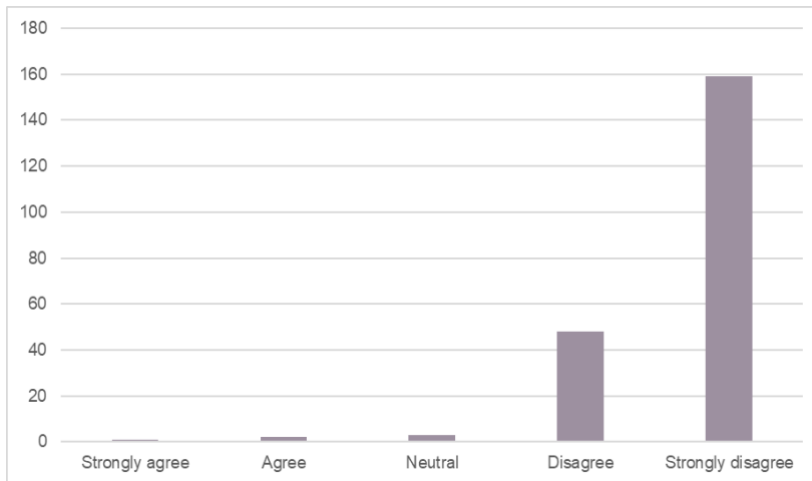
Crypto-currencies have the same legal tender as banknotes and coins.	Frequency Percentage	
	TRUE	73
FALSE	140	65.73
Total	213	100.00

Participants knowledge on the legal tender status of crypto-currencies

Section 5 – Digital Financial Behaviour

5.1 Sharing of Bank Account Passwords

The figure illustrates that although participants were given five response options, all participants essentially expressed disagreement, with 74.65% selecting 'strongly disagree' and 22.54% opting for 'disagree.' This indicates an almost unanimous sentiment of opposition, with the only difference being the varying degrees of resistance.



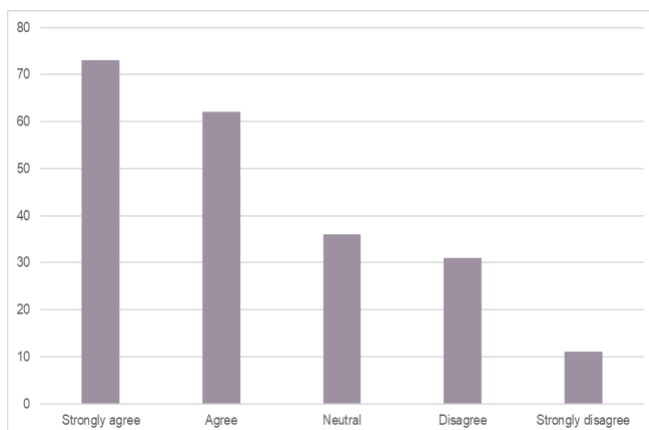
Participants behaviour towards the sharing of bank account passwords

I share the passwords and PINs of my bank account with close friends.		Frequency	Percentage
	Strongly agree	1	0.47
	Agree	2	0.94
	Neutral	3	1.41
	Disagree	48	22.54
	Strongly disagree	159	74.65
Total	213	100.00	

Participants behaviour towards the sharing of bank account passwords

5.2 Verifying Regulators of Online Financial Providers

The figure illustrates that more than half of the respondents agreed that, before purchasing a financial product online, they should verify whether the provider is regulated in the country, with 34.27% strongly agreeing and 29.11% agreeing.



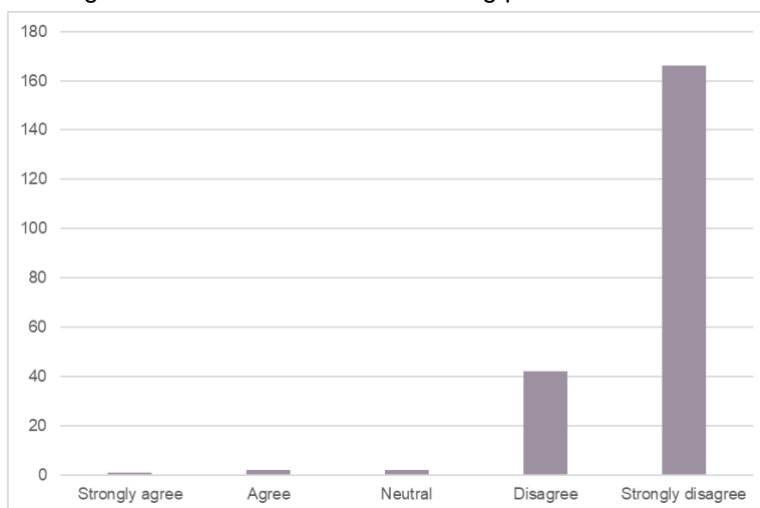
Participants behaviour towards the verifying regulators of online financial providers

Before buying a financial product online I check if the provider is regulated in my country.		Frequency	Percentage
	Strongly agree	73	34.27
	Agree	62	29.11
	Neutral	36	16.90
	Disagree	31	14.55
	Strongly disagree	11	5.16
Total	213	100.00	

Participants behaviour towards the verifying regulators of online financial providers

5.3 Public Sharing of Personal Financial Information

The figure presents a striking result, with almost all participants (97.65%) expressing some level of disagreement about the idea of sharing personal financial information publicly online.



Participants behaviour towards the public sharing of personal financial information

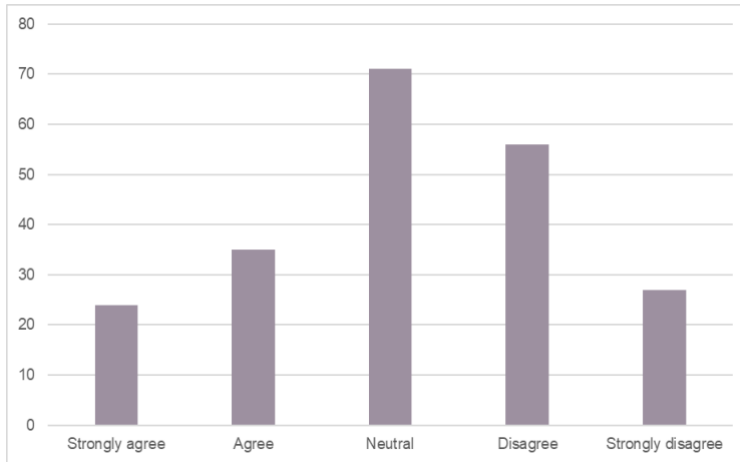
I share information about my personal finances publicly online (e.g., on social media).		Frequency	Percentage
	Strongly agree	1	0.47
	Agree	2	0.94
	Neutral	2	0.94
	Disagree	42	19.72
	Strongly disagree	166	77.93
Total	213	100.00	

Participants behaviour towards the public sharing of personal financial information

5.4 Regularly Changing Online Finance Passwords

The Figure illustrates that when it comes to changing passwords for online shopping and personal finance websites, most participants felt indifferent as the most common response was

'Neutral' (33.33%), whilst 'Disagree' was the second most popular option, with 26.29% people choosing it.



Participants behaviour towards regularly changing online finance passwords

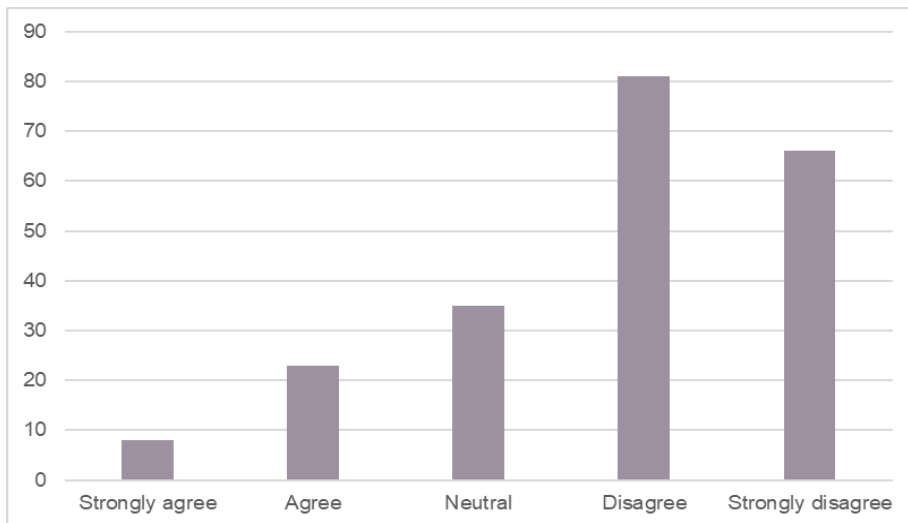
I regularly change the passwords on websites that I use for online shopping and personal finance.		Frequency	Percentage
	Strongly agree	24	11.27
	Agree	35	16.43
	Neutral	71	33.33
	Disagree	56	26.29
	Strongly disagree	27	12.68
Total	213	100.00	

Participants behaviour towards regularly changing online finance passwords

Section 6 – Digital Financial Attitudes

6.1 Safety of using Public Wi-Fi to online shop

The majority of participants expressed some level of disagreement with the idea that it was safe to shop online using public Wi-Fi networks, with 38.03% selecting 'disagree' and 30.99% selecting 'strongly disagree'.



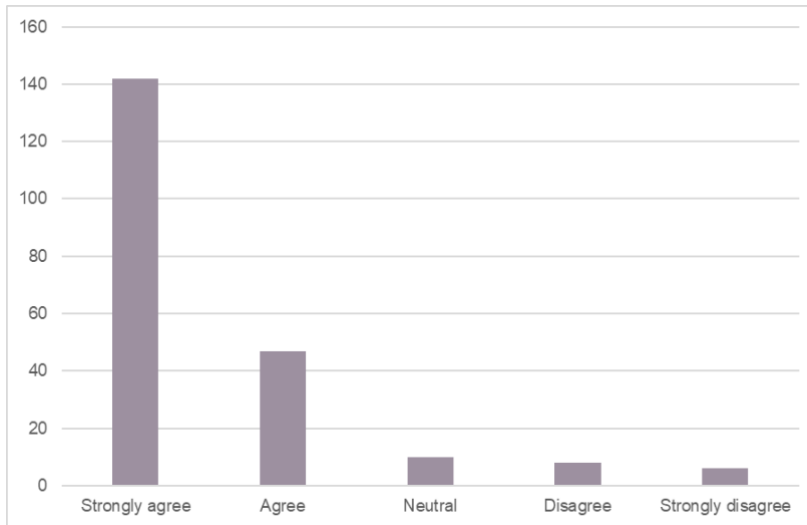
Participants attitudes towards the security of a website when making online transactions

I think that it is safe to shop online using public Wi-Fi networks.		Frequency	Percentage
	Strongly agree	8	3.76
	Agree	23	10.80
	Neutral	35	16.43
	Disagree	81	38.03
	Strongly disagree	66	30.99
Total	213	100.00	

Participants attitudes towards the security of a website when making online transactions

6.2 Importance of Website Security in Online Transactions

The figure clearly indicates that nearly everyone agreed to some extent on the importance of paying attention to a website's security before making an online transaction. A significant 66.67% of respondents strongly agreed, whilst 22.07% agreed. This overwhelming consensus highlights that the vast majority of participants recognise the critical role of website security in online transactions, with very few holding a differing opinion.



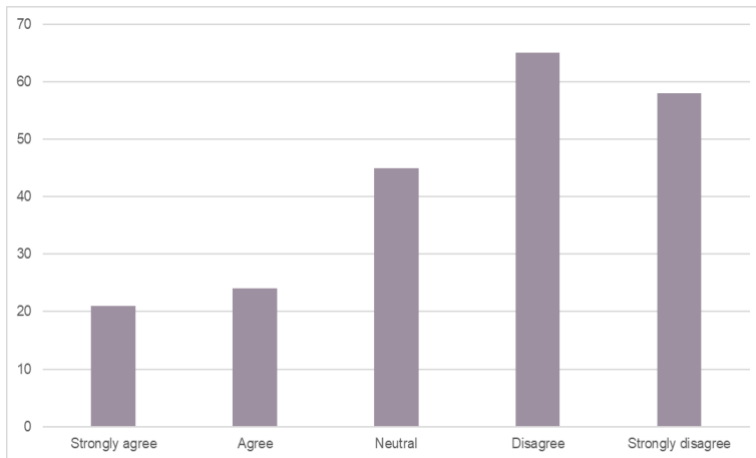
Participants attitudes towards reading the terms and conditions

It is important to pay attention to the security of a website before making a transaction online.		Frequency	Percentage
	Strongly agree	142	66.67
	Agree	47	22.07
	Neutral	10	4.69
	Disagree	8	3.76
	Strongly disagree	6	2.82
Total	213	100.00	

Participants attitudes towards reading the terms and conditions

6.3 Importance of Reading Terms and Conditions for Online Purchases

Almost 60% of the respondents expressed some level of disagreement with the idea that it was not important to read the terms and conditions when buying something online, with 30.52% selecting 'disagree' and 27.23% selecting 'strongly disagree'.



Participants attitudes towards reading the terms and conditions

I think it is not important to read the terms and conditions when buying something online.		Frequency	Percentage
	Strongly agree	21	9.86
	Agree	24	11.27
	Neutral	45	21.13
	Disagree	65	30.52
	Strongly disagree	58	27.23
Total	213	100.00	

Participants attitudes towards reading the terms and conditions

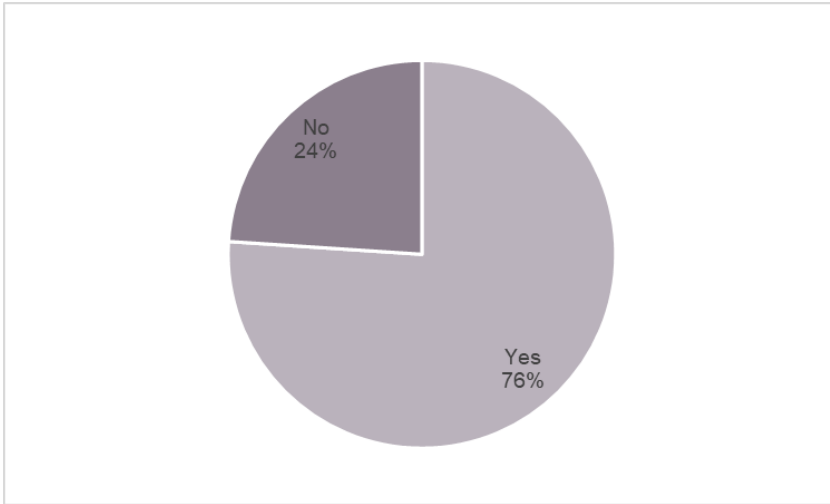
Section 7 – Financial Wellbeing

In this section, participants were evaluated on their financial Wellbeing, assessing both their financial resilience and hence objective measures of financial wellbeing as well as subjective financial wellbeing. The evaluation measured how effectively they manage their finances, whether they are meeting their financial goals, and how well they cope with financial stress or challenges.

7.1 Objective Financial well-being

7.1.1 Ability to Cover a Major Expense Without Assistance

When asked if the participants could handle a major expense without borrowing, it was noted that a strong majority of 76.06% said "Yes," while 23.94% said "No."



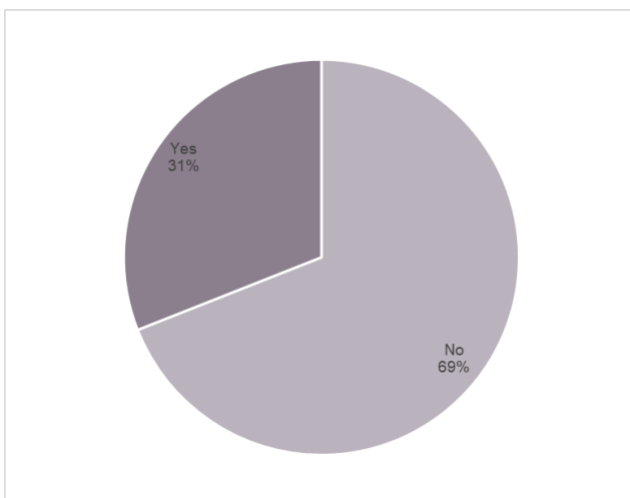
Participants ability to cover a major expense without assistance

If you, personally, faced a major expense today – equivalent to your own monthly income – would you be able to pay it without borrowing the money or asking family or friends to help?	Frequency	Percentage
Yes	162	76.06
No	51	23.94
Total	213	100.00

Participants ability to cover a major expense without assistance

7.1.2 Income Insufficiency for Living Expenses in the Last 12 Months

The most common response to whether income covered living expenses was "No" (69.01%), with the remaining 30.99% answering "Yes".



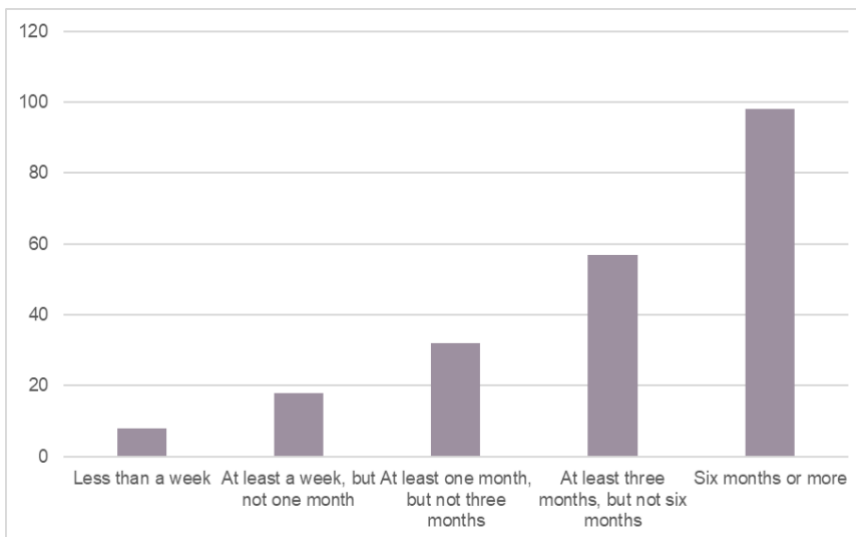
Participants ability for their income to cover their expenses

Sometimes people find that their income does not quite cover their living expenses. In the last 12 months, has this personally happened to you?	Kindly answer yes or no to these statements.	Frequency	Percentage
	No	147	69.01
	Yes	66	30.99
	Total	213	100.00

Participants ability for their income to cover their expenses

7.1.3 Financial Resilience in the Event of Income Loss

When asked how long they could cover living expenses after losing their main income source, almost half the respondents, i.e., 46.01% answered ‘Six months or more’ whilst the least common answer was "Less than a week".



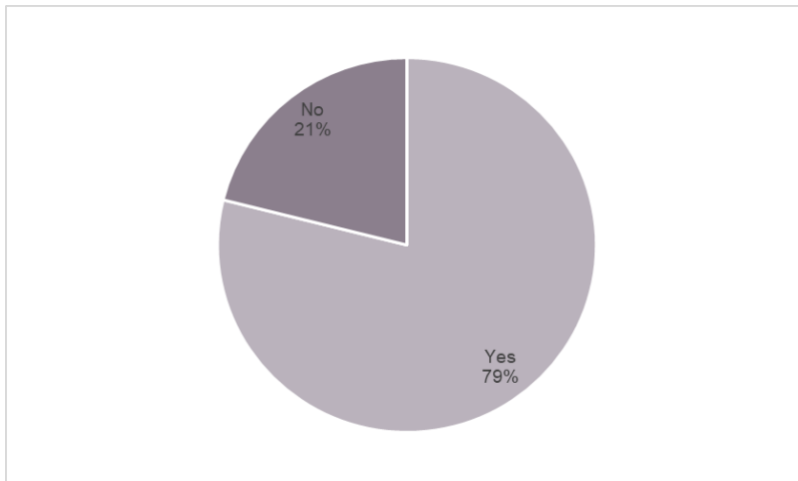
Participants financial resilience in the event of income loss

If you lost your main source of income today, how long could you continue to cover your living expenses, without borrowing any money or moving house?		Frequency	Percentage
	Less than a week	8	3.76
	At least a week, but not one month	18	8.45
	At least one month, but not three months	32	15.02
	At least three months, but not six months	57	26.76
	Six months or more	98	46.01
Total	213	100.00	

Participants financial resilience in the event of income loss

7.1.4 Having Money Left Over at the End of the Month

The majority of the participants (78.87%) stated that they have money left over at the end of the month, while 21.13% do not.



Participants having money left over at the end of the month

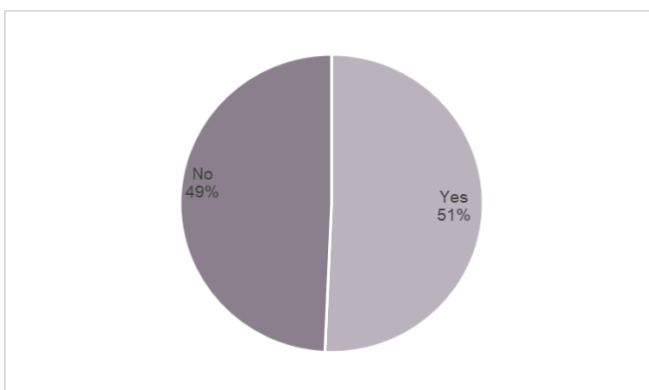
		Frequency	Percentage
I have money left over at the end of the month.	Yes	168	78.87
	No	45	21.13
	Total	213	100.00

Participants having money left over at the end of the month

7.2 Subjective Financial well-being

7.2.1 Satisfaction with Current Financial Situation

The sample was nearly divided in half with 50.70% of respondents expressed satisfaction with their financial situation at the end of the month, while 49.30% were not satisfied.



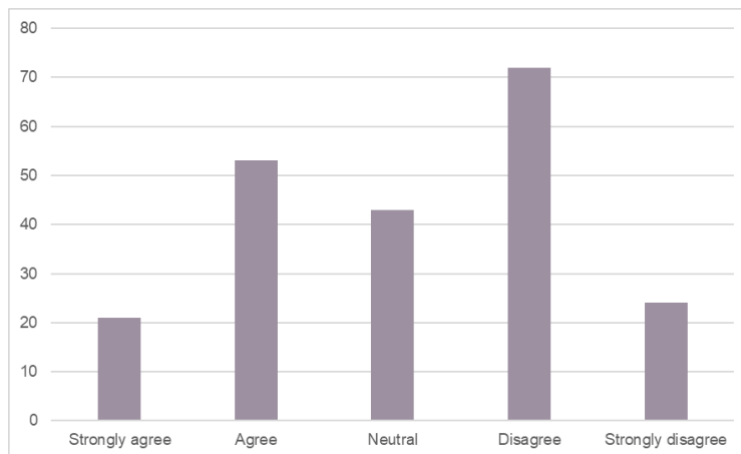
Participants satisfaction with their current financial situation

I am satisfied with my present financial situation.		Frequency	Percentage
	Yes	108	50.70
	No	105	49.30
	Total	213	100.00

Participants satisfaction with their current financial situation

7.2.2 Financial Situation's Impact on Life Goals

The results depicted in the Figure and Table illustrate that the most frequent response (33.8%) was 'disagree', followed by 'agree' (24.88%), and then 'neutral' (20.19%). This distribution suggests that many respondents are divided on the issue, with a significant portion on opposite sides of the spectrum, either disagreeing or agreeing. The notable percentage of neutral responses further indicates that a number of participants remain indecisive whether to agree or disagree. This spread of opinions highlights both a clear divide and some uncertainty among the respondents.



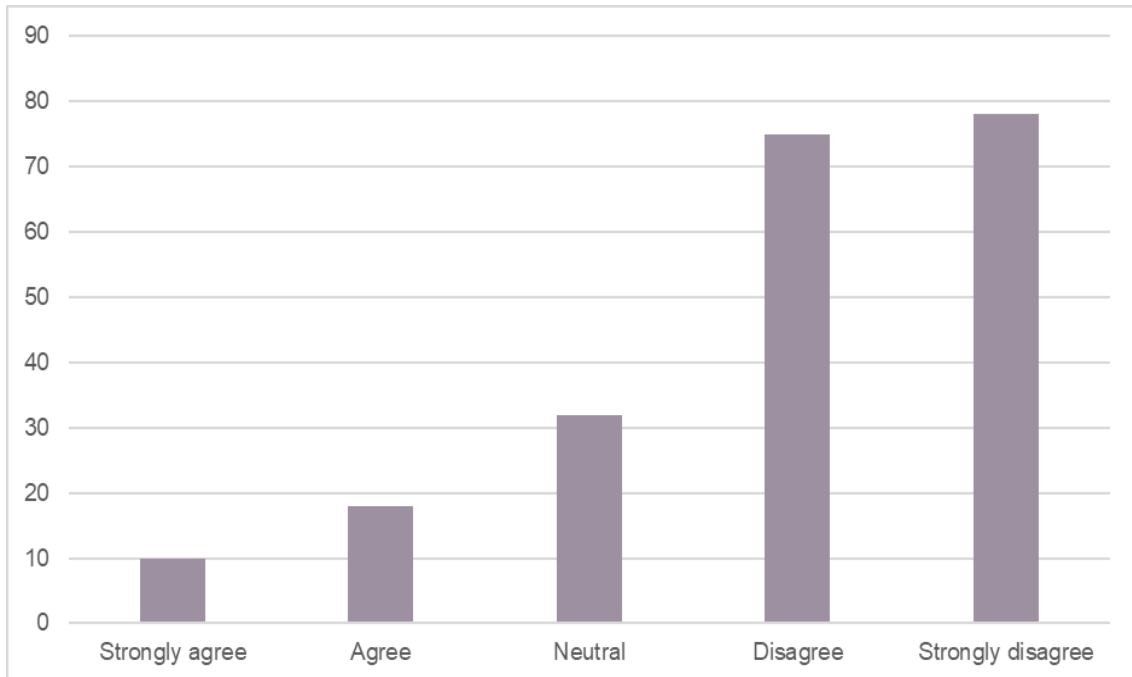
Participants financial situations impact on life goals

My financial situation limits my ability to do the things that are important to me.		Frequency	Percentage
	Strongly agree	21	9.86
	Agree	53	24.88
	Neutral	43	20.19
	Disagree	72	33.80
	Strongly disagree	24	11.27
	Total	213	100.00

Participants financial situations impact on life goals

7.2.3 Current Debt Burden

When asked on their debt situation, the vast majority of the participants, almost 72%, indicated that they don't have a lot of debt, with 36.62% of respondents strongly disagreeing followed closely by 35.21% of participants who responded disagree.



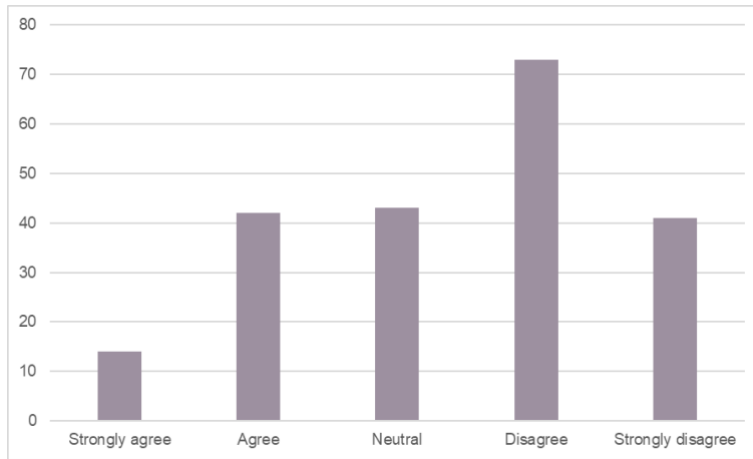
Participants current level of debt

	Frequency	Percentage
I have too much debt right now.	Strongly agree	4.69
	Agree	8.45
	Neutral	15.02
	Disagree	35.21
	Strongly disagree	36.62
Total	213	100.00

Participants current level of debt

7.2.4 Worrying About Covering Living Expenses

The results indicate that most participants do not tend to worry about their normal living expenses, with 34.27% selecting disagree and a further 19.25% selecting strongly disagree.



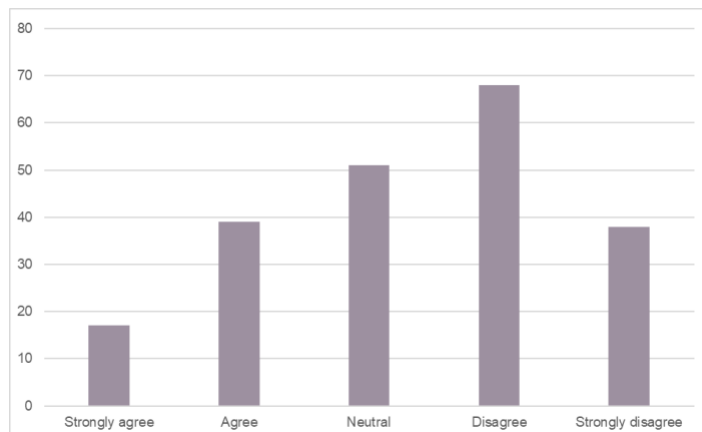
Participants level of worry concerning covering living expenses

I tend to worry about paying my normal living expenses.		Frequency	Percentage
	Strongly agree	14	6.57
	Agree	42	19.72
	Neutral	43	20.19
	Disagree	73	34.27
	Strongly disagree	41	19.25
Total	213	100.00	

Participants level of worry concerning covering living expenses

7.2.5 Financial Control Over Personal Life

In line with the previous data collected, most respondents disagreed to the statement that "My finances control my life", with almost half the sample size stating that they disagree or strongly disagree to the statement.



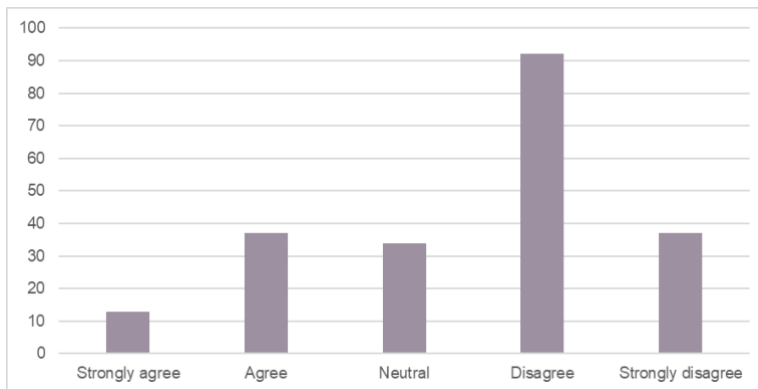
Participants financial control over personal life

My finances control my life.		Frequency	Percentage
	Strongly agree	17	7.98
	Agree	39	18.31
	Neutral	51	23.94
	Disagree	68	31.92
	Strongly disagree	38	17.84
	Total	213	100.00

Participants financial control over personal life

7.2.6 Feeling Financially Limited in Achieving Life Goals

43.19% of participants disagreed that their financial situation would prevent them from obtaining what they want in life, whilst only 6.10% strongly agreed with the statement.



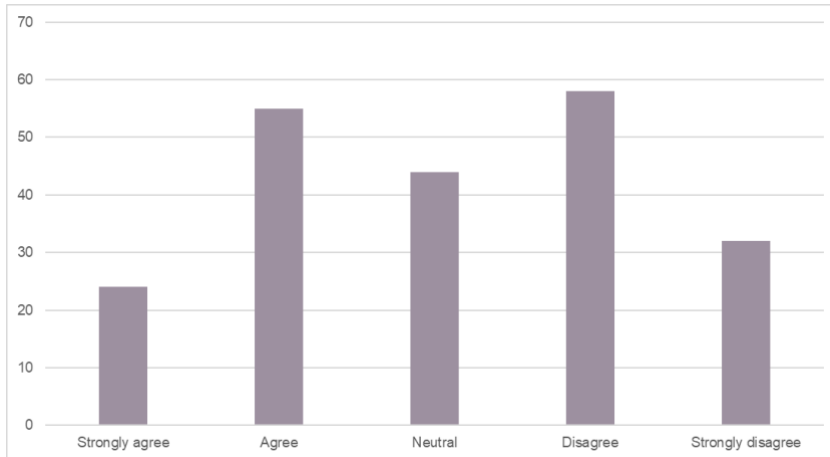
Participants feeling financially limited in achieving life goals

Because of my money situation, I feel like I will never have the things I want in life.		Frequency	Percentage
	Strongly agree	13	6.10
	Agree	37	17.37
	Neutral	34	15.96
	Disagree	92	43.19
	Strongly disagree	37	17.37
	Total	213	100.00

Participants feeling financially limited in achieving life goals

7.2.7 Struggling to Get By Financially

Interestingly enough, the Figure and Table show a relatively even distribution across the spectrum, with some participants disagreeing (27.23%), others agreeing (25.82%), and a portion remaining neutral (20.66%) regarding concerns about their money lasting. This suggests a balanced mix of opinions on financial stability within the group.



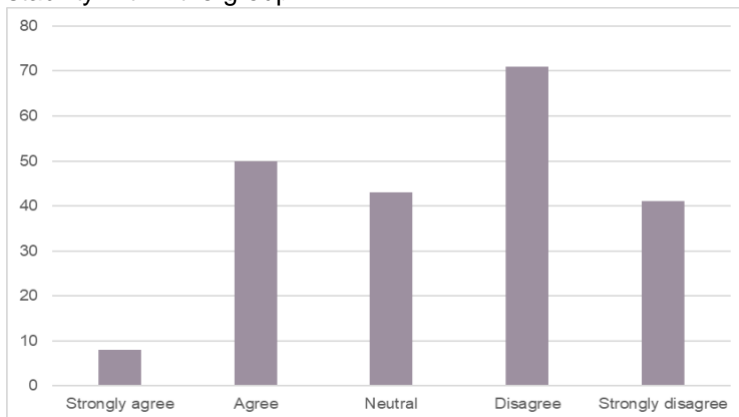
Participants struggling about money running out

	Frequency	Percentage
I am concerned that my money won't last.		
Strongly agree	24	11.27
Agree	55	25.82
Neutral	44	20.66
Disagree	58	27.23
Strongly disagree	32	15.02
Total	213	100.00

Participants struggling about money running out

7.2.8 Struggling to Get by Financially

The responses regarding the statement "I am just getting by financially" showed a spread across different views. A significant portion of 31.46% participants disagreed, while 23.47% agreed, and 20.66% remained neutral, reflecting a balanced range of opinions on financial stability within the group.



Participants struggling about money running out

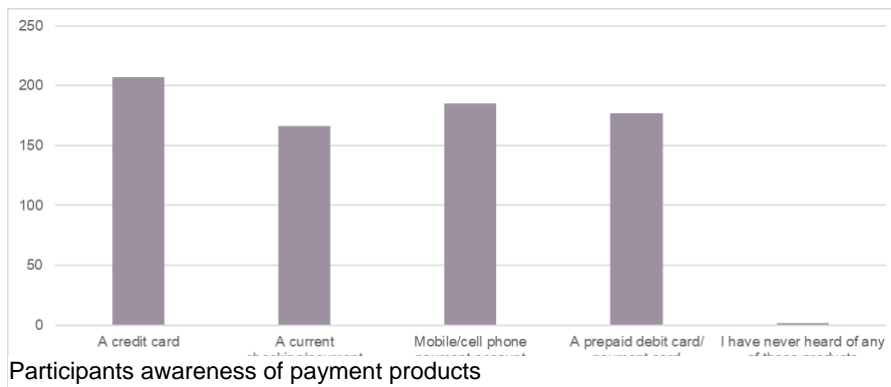
I am just getting by financially.		Frequency	Percentage
	Strongly agree	8	3.76
	Agree	50	23.47
	Neutral	43	20.19
	Disagree	71	33.33
	Strongly disagree	41	19.25
Total	213	100.00	

Participants struggling about money running out

Section 8 – Financial Products

8.1 Awareness of payment products

The Figure and Table illustrate how almost every single one of the participants is aware of at least one of the payment products listed, except for 0.27% who stated that they have never heard of the following payment products.

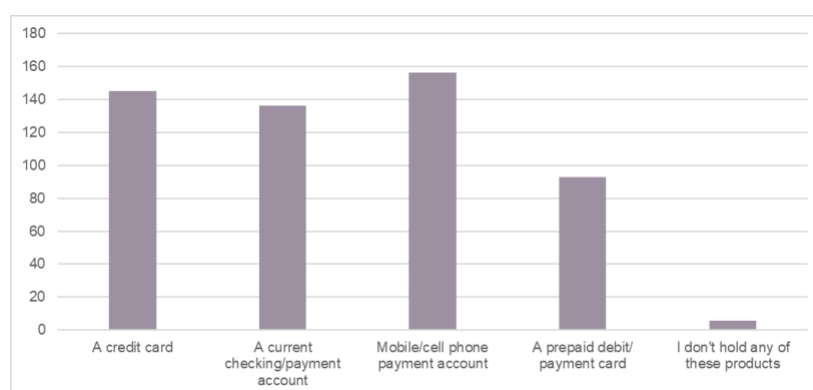


Please can you tell me whether you have heard of any of these types of financial products?		Frequency	Percentage
	A credit card	207	28.09
	A current checking/payment account	166	22.52
	Mobile/cell phone payment account	185	25.10
	A prepaid debit card/ payment card	177	24.02
	I have never heard of any of these products	2	0.27
Total	737	100.00	

Participants awareness of payment product

8.2 Holding of payment products

The Figure and Table illustrate how most participants have not only heard of the following payment products but also hold them. The top three most commonly held financial products among participants were savings accounts, with 84.04% of respondents holding one, followed by debit cards at 74.18%, and pension plans, which are held by 64.79% of participants. These figures indicate that the majority prioritised savings and everyday banking products, as well as planning for retirement.



Participants holding of payment products

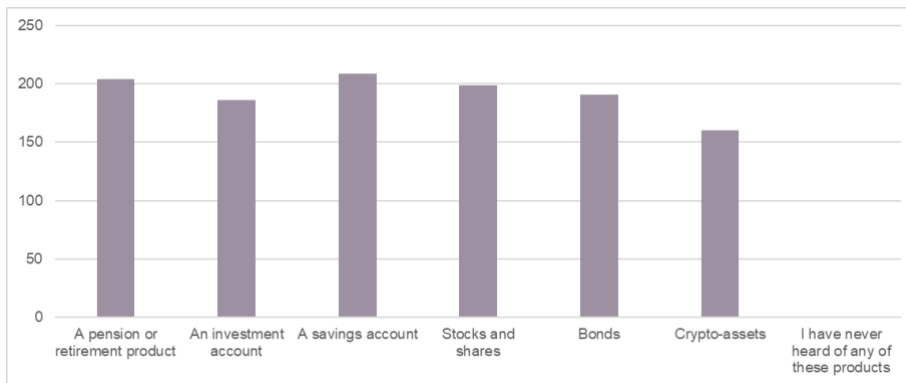
Do you currently hold any of these types of products?	Frequency	Percentage	
	A credit card	145	27.05
	A current checking/payment account	136	25.37
	Mobile/cell phone payment account	156	29.10
	A prepaid debit/ payment card	93	17.35
	I don't hold any of these products	6	1.12
Total	536	100.00	

Participants holding of payment products

8.3 Awareness of savings, investment or retirement products

The Figure and Table demonstrate that the most recognised product was a savings account, with a large number of participants aware of it, followed closely by stocks and shares and pensions or retirement products. Awareness of bonds and crypto-assets was also high, though slightly lower compared to these more traditional products. Notably, no participants indicated

that they had never heard of any of these products, suggesting widespread familiarity with all types of savings, investment, and retirement products.



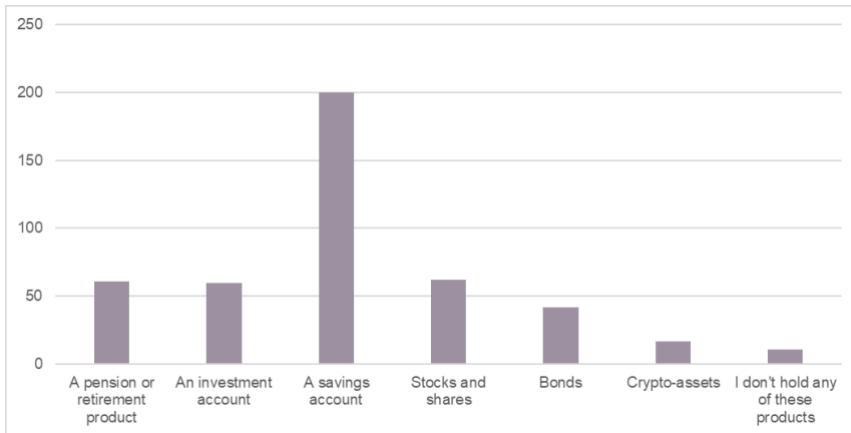
Participants awareness of savings, investment or retirement products

Please can you tell me whether you have heard of any of these types of financial products?		Frequency	Percentage
	A pension or retirement product	204	17.75
	An investment account	186	16.19
	A savings account	209	18.19
	Stocks and shares	199	17.32
	Bonds	191	16.62
	Crypto-assets	160	13.93
	I have never heard of any of these products	0	0.00
Total	1149	100.00	

Participants awareness of savings, investment or retirement products

8.4 Holding of savings, investment or retirement products

The figure and table show that the most commonly held product among participants is a savings account, with 44.15% of respondents indicating they owned one. Other products, such as pensions or retirement products (13.47%), stocks and shares (13.69%), and investment accounts (13.25%) are also held, but to a significantly lesser extent. A small percentage of participants (2.43%) indicated that they do not hold any of these financial products. This data reflects a clear preference for savings accounts as the primary financial tool.



Participants holding of savings, investment or retirement products

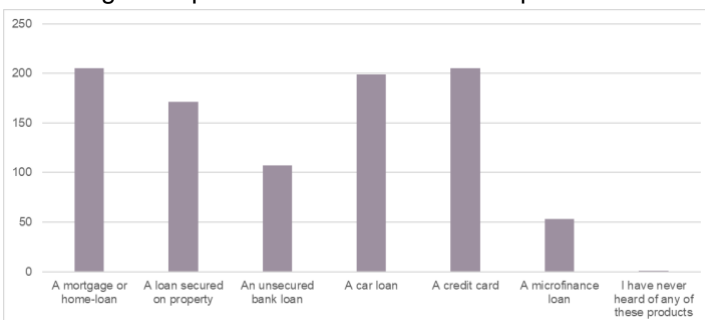
Do you currently hold any of these types of products?	Frequency	Percentage	
	A pension or retirement product	61	13.47
	An investment account	60	13.25
	A savings account	200	44.15
	Stocks and shares	62	13.69
	Bonds	42	9.27
	Crypto-assets	17	3.75
	I don't hold any of these products	11	2.43
Total	453	100.00	

Participants holding of savings, investment or retirement products

8.5 Awareness of credit products

Participants were highly aware of traditional credit products like credit cards, car loans, and mortgages. Awareness was somewhat lower for unsecured bank loans and microfinance loans.

Overall, only a small number of participants were unfamiliar with any of these products, indicating widespread awareness of credit options.



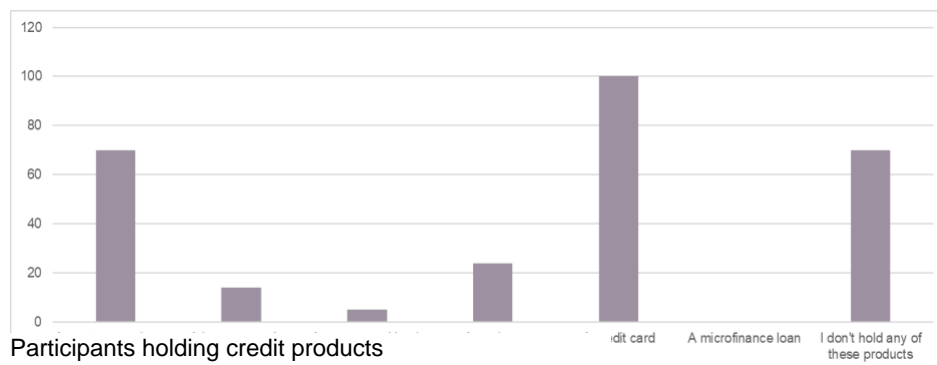
Participants awareness of credit products

Please can you tell me whether you have heard of any of these types of financial products	Frequency	Percentage	
	A mortgage or home-loan	205	21.79
	A loan secured on property	171	18.17
	An unsecured bank loan	107	11.37
	A car loan	199	21.15
	A credit card	205	21.79
	A microfinance loan	53	5.63
	I have never heard of any of these products	1	0.11
	Total	941	100.00

Participants awareness of credit products

8.6 Holding of credit products

The Figure and Table demonstrate that the most commonly held financial product is a credit card, with 35.34% of respondents indicating they had one. Interestingly, 24.73% of participants indicated that they do not hold any of the listed financial products, the same percentage as those with a mortgage or home loan. Additionally, no one seems to hold a microfinance loan.

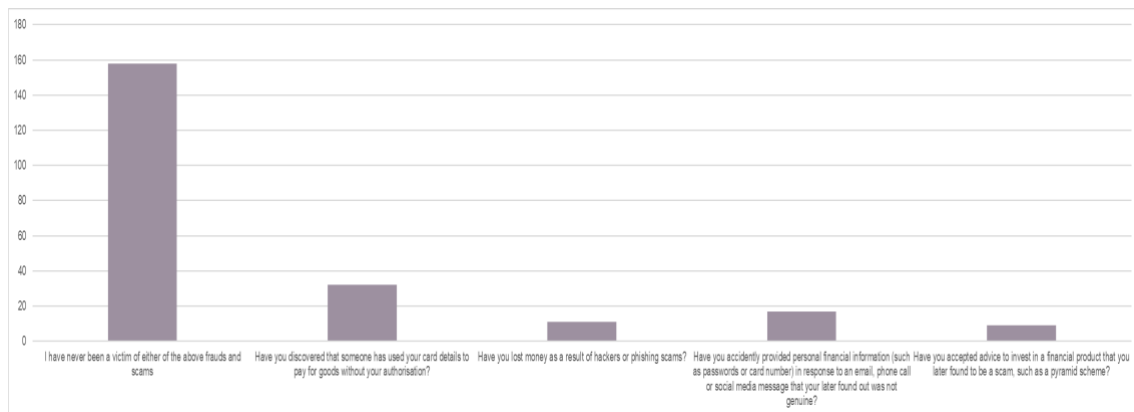


Do you currently hold any of these types of products?	Frequency	Percentage	
	A mortgage or home-loan	70	24.73
	A loan secured on property	14	4.95
	An unsecured bank loan	5	1.77
	A car loan	24	8.48
	A credit card	100	35.34
	A microfinance loan	0	0.00
	I don't hold any of these products	70	24.73
	Total	283	100.00

Participants holding credit products

8.7 Victim of a financial fraud or scam

A large portion of the sample size, specifically, 69.60% of the participants revealed that they have never been a victim of either of the above frauds and scams.



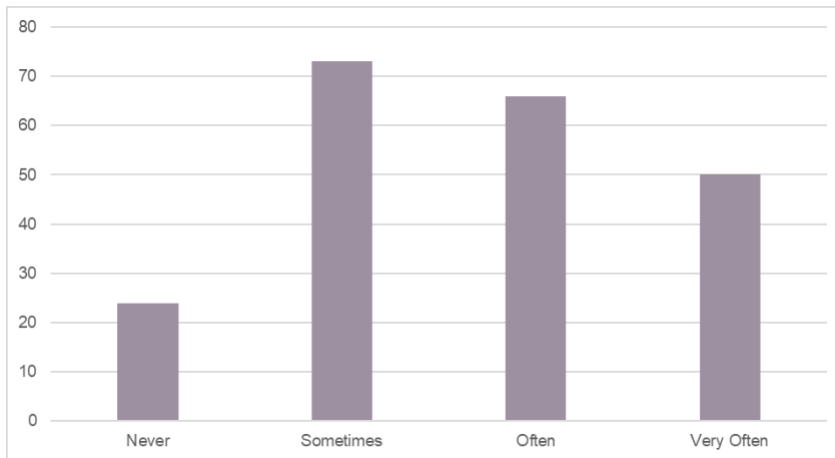
Participants being a victim of a fraud or a scam

		Frequency	Percentage
Have you ever been a victim of either of the following frauds and scams?	I have never been a victim of either of the above frauds and scams	158	69.60
	Have you discovered that someone has used your card details to pay for goods without your authorisation?	32	14.10
	Have you lost money as a result of hackers or phishing scams?	11	4.85
	Have you accidentally provided personal financial information (such as passwords or card number) in response to an email, phone call or social media message that your later found out was not genuine?	17	7.49
	Have you accepted advice to invest in a financial product that you later found to be a scam, such as a pyramid scheme?	9	3.96
Total		227	100.00

Participants being a victim of a fraud or a scam

8.8 Digital Financial Services

The predominant response was when asked about their management of financial products and services online during the last 12 months was 'Sometimes', which was selected by 34.27% of participants, followed closely by often and very often, whereas the least frequent response was "Never," chosen by 11.27%.



Managing Financial Products and Services Online

In the last 12 months, how often have you managed financial products and services (such as savings, investments, credit, insurance) online?	Frequency	Percentage
Never	24	11.27
Sometimes	73	34.27
Often	66	30.99
Very Often	50	23.47
Total	213	100.00

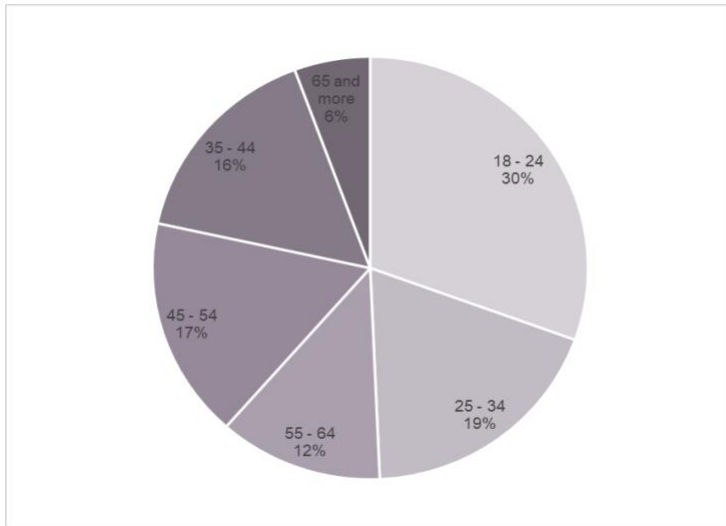
Managing Financial Products and Services Online

Section 9 – Participant Demographics

9.1 Age Categories of Participants

In the last section of the questionnaire, the demographics of the participants was inquired in order to better understand the sample type obtained.

The sample consisted of two hundred thirteen female individuals. The participants were additionally classified into six age groups, spanning from 18 years to over 65 years of age.



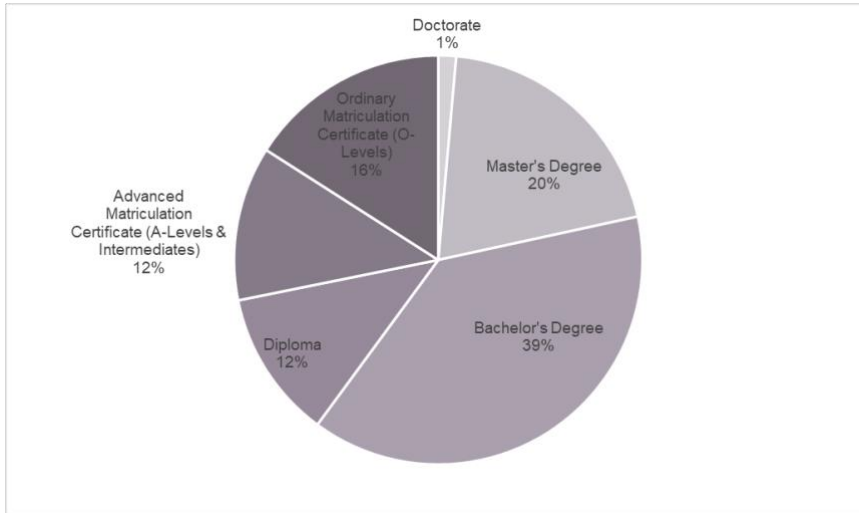
Age Categories of Participants

Age		
	Frequency	Percentage
18 - 24	65	30.52
25 - 34	40	18.78
55 - 64	26	12.21
45 - 54	36	16.90
35 - 44	34	15.96
65 and more	12	5.63
Total	213	100.00

Age Categories of Participants

9.2 Highest Education level of Participants

The Figure showcases the level of education of the participants, where over 71% of the participants have obtained some kind of tertiary level education, being a diploma, a bachelor's degree, a mater's degree or a doctorate.



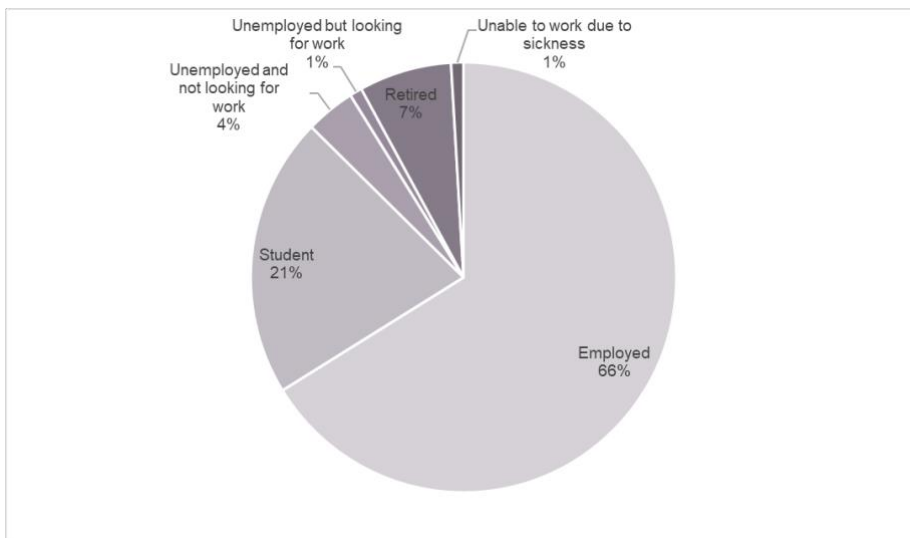
Highest Education level of Participants

What is the highest level of education that you have completed?	Frequency	Percentage	
	Doctorate	3	1.41
	Master's Degree	43	20.19
	Bachelor's Degree	82	38.50
	Diploma	25	11.74
	Advanced Matriculation Certificate (A-Levels & Intermediates)	26	12.21
	Ordinary Matriculation Certificate (O-Levels)	34	15.96
	Total	213	100.00

Highest Education level of Participants

9.3 Employment Status of Participants

The Figure depicts the current employment status of the participants, with 66.2% currently in full-time employment.



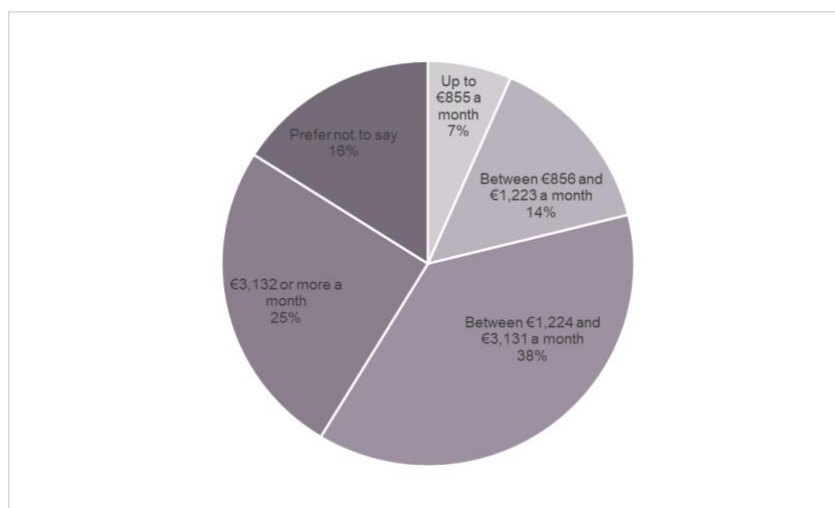
Employment Status of Participants

What is your employment status?		Frequency	Percentage
		Employed	141
Student	45	21.13	
Unemployed and not looking for work	8	3.76	
Unemployed but looking for work	2	0.94	
Retired	15	7.04	
Unable to work due to sickness	2	0.94	
Total	213	100.00	

Employment Status of Participants

9.4 Income level of Participants

The figure illustrates that the majority reported a monthly household income between €1,224 and €3,131 (37.56%), while the least common response was those earning up to €855 (6.57%).



Income level of Participants

Could you tell me which of these categories your household monthly income after tax deduction usually falls into?	Frequency	Percentage
	Up to €855 a month	14
Between €856 and €1,223 a month	31	14.55
Between €1,224 and €3,131 a month	80	37.56
€3,132 or more a month	54	25.35
Prefer not to say	34	15.96
Total	213	100

Income level of Participants

Appendix D – Excel File for Financial Literacy Measurement

The table of how financial literacy scores were attributed and how financial literacy was measured are available as a separate Excel file [at this link](#).