

A DIGITAL FINANCIAL LITERACY STRATEGY FOR PORTUGAL



Funded by
the European Union

Please cite as: OECD (2023), *A Digital Financial Literacy Strategy for Portugal*,
<https://www.oecd.org/finance/financial-education/a-digital-financial-literacy-strategy-for-portugal.pdf>

© OECD 2023.

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Member countries of the OECD.

This document was produced with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Cover: © Natalya Bosyak / Getty Images.

Foreword

This document sets out a Digital Financial Literacy Strategy for Portugal (hereafter “the Strategy”). It has been developed as part of the Project to “Design of a digital financial literacy strategy for Portugal” undertaken by the OECD for the Banco de Portugal, with the support of the European Commission. The Strategy includes an Implementation Roadmap for the period 2023-28.

The Strategy builds on the findings from the OECD report “Digital financial literacy in Portugal: Relevance, evidence and provision” (OECD, 2023^[1]) (hereafter “the mapping report”). The mapping report which was conducted over the course of 2022-23 provided evidence and analysis to inform the design of the Strategy, based on a data collection exercise, research and consultations with stakeholders.

The Strategy sets out a long-term vision and objectives, supported by short and medium-term actions to guide the Banco de Portugal and other Portuguese stakeholders with an interest in improving digital financial education. It is tailored to respond to the digital financial literacy needs of the Portuguese population and takes into consideration the existing national digital financial education ecosystem.

The Strategy aims to empower the Portuguese population to use digital financial services as well as contribute to reducing digital financial exclusion. It seeks to enable people to make a safe use of digital financial services by adopting safe behaviours and attitudes, therefore supporting them to be more resilient to online fraud attempts and cybersecurity attacks. It also aims to make people more aware of their behavioural biases when accessing and using financial products and services through digital channels, and mitigate associated risks, such as impulsive buying and over-indebtedness.

Overall, the Strategy is intended to support people living in Portugal to improve their financial well-being and resilience. By instilling more trust and confidence in digital financial services, the Strategy is also expected to benefit the Portuguese financial system and ultimately contribute to the inclusive and sustainable development of the Portuguese economy and society.

This work is the result of the co-operation between the Banco de Portugal – which has requested support from the European Commission under the Technical Support Instrument 2021- the European Commission and the OECD, designated as implementing partner of the Project.

The Strategy is a proposal for the Banco de Portugal to adopt and implement. The achievement of the vision and objectives of the Strategy will depend on the implementation and actions by the Banco de Portugal and other stakeholders, in conjunction with inter-related policy agendas. The OECD stands ready to continue supporting the Banco de Portugal in this endeavour.

Table of contents

Foreword	2
Acknowledgements	4
1 Importance and relevance of a Digital Financial Literacy Strategy	5
Digital financial literacy and the need for a strategy	5
Addressing existing needs and gaps in digital financial education in Portugal	8
Complementing and supporting the existing policy agenda in Portugal	10
2 Strategic Vision, Objectives and Governance	13
Vision of the Strategy	13
Objectives of the Strategy	13
Governance of the Strategy	18
Timescale of the Strategy and its Implementation Roadmap	19
Monitoring and evaluation of the Strategy	19
3 Implementation Roadmap (2023-28)	22
Priority target groups for the Implementation Roadmap (2023-28)	22
Actions to implement the Strategy's Objectives (2023-28)	23
Annex A. Summary of Actions	29
Annex B. Performance indicators	36
References	39
FIGURES	
Figure 1. Structure of the Strategy	14
TABLES	
Table A 1. Summary of actions	30
Table A 2. List of possible performance indicators	36

Acknowledgements

The Strategy has been prepared by Thomas Montcourrier, Policy Analyst, OECD under the supervision of Chiara Monticone and Miles Larbey and with oversight from Flore-Anne Messy within the OECD Directorate for Financial and Enterprise Affairs.

The development of the Strategy benefitted considerably from the support, input and review offered by Maria Lúcia Leitão, Head of the Banking Conduct Supervision Department, Susana Narciso, Head of the Market Monitoring and Financial Education Division, and Maria Carolina Campos, Co-ordinator in the Market Monitoring and Financial Education Division, from the Banco de Portugal, as well as from the contribution of the European Commission's DG REFORM.

The Project was funded by the European Union via the Technical Support Instrument (TSI), and implemented by the OECD, in co-operation with the Directorate-General for Structural Reform Support (DG REFORM) of the European Commission.

The European Commission's Directorate General for Structural Reform Support (DG REFORM) provides support for the preparation and implementation of growth-enhancing administrative and structural reforms by mobilising EU funds and technical expertise, in accordance with the criteria and principles referred to in Article 7(2) of the Regulation (EU) 2017/825.

The OECD started its financial literacy project in 2002 and established the OECD International Network on Financial Education (OECD/INFE) in 2008. It is globally acknowledged as the international leader in the development of policy instruments, data and research on financial education and literacy.

1 Importance and relevance of a Digital Financial Literacy Strategy

Digital financial literacy and the need for a strategy

Current trends

Technology and digitalisation are transforming the way in which all players in the financial sector are operating. Digitalisation of financial services has given greater opportunities to individuals to access finance, manage their personal finances and plan their financial future. For many, it has also made such access faster, more convenient and cheaper, through the use of mobile apps or online platforms.

Trends towards greater digitalisation have been further accelerated by the response to the COVID-19 pandemic (OECD, 2021^[2]; World Bank, 2022^[3]), which saw many people making greater use of digital tools (such as programmes, apps, or other software available on a digital channel to help people manage their personal finances) in order to abide by social distancing or lockdown requirements. Many consumers began to use digital channels to carry out their daily financial operations for the first time, even those less familiar with new technologies.

At the same time, greater digitalisation has introduced greater complexity, new challenges and risks for financial consumers (OECD, 2021^[4]). New players (e.g. FinTechs) and products (e.g. crypto-assets) have entered the market, sometimes operating on a cross-border basis. Digitalisation has increased consumer exposure to online frauds and scams, such as phishing schemes, as well as digital security risks, such as account hacking or data theft. This exposure can undermine the financial resilience and well-being of consumers due to direct financial losses and loss of trust.

Increased digitalisation can also risk leading to new types of exclusion for certain groups of the population, notably those with low digital skills or those who do not have access to digital tools. Furthermore, transacting via digital channels may lead some financial consumers to make impulsive financial decisions, given the speed of access to financial products and services. This may have serious consequences, such as greater indebtedness for example. At an aggregate level, these negative outcomes can damage trust and confidence in digital financial services, the financial system and technological innovation (OECD, 2018^[5]).

Box 1. Definitions used in the Strategy

Digital financial education (“DFE”):

Digital financial education refers to initiatives/programmes providing information, education and generic guidance on the use of digital financial services.

Digital financial literacy (“DFL”):

A combination of knowledge, skills, attitudes and behaviours necessary for individuals to be aware of and safely use digital financial services and digital technologies with a view to contributing to their financial well-being (OECD, 2022^[6]).

Digital financial services (“DFS”):

Financial operations using digital technology, including electronic money, mobile financial services, online financial services, i-teller and branchless banking, whether through bank or non-bank institutions. DFS can encompass various monetary transactions such as depositing, withdrawing, sending and receiving money, as well as other financial products and services including payment, credit, saving, pensions and insurance. DFS can also include non-transactional services, such as viewing personal financial information through digital devices (OECD, 2017^[7]).

Financial education:

The process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being (OECD, 2012^[8]).

Financial literacy:

A combination of financial awareness, knowledge, skills, attitudes and behaviours necessary to make sound financial decisions and ultimately achieve individual financial well-being (OECD, 2020^[9]).

Financial resilience:

Financial resilience can be thought of as the ability of individuals or households to resist, cope and recover from negative financial shocks. Such negative financial shocks can result from various unexpected events, including those related to employment, health, changes in family composition, damage to household possessions, or other large unexpected expenses. The ability to avoid losing financial resources from fraud/scams attempts can also support financial resilience (OECD, 2021^[2]; OECD, 2020^[10]).

Financial well-being:

Financial well-being is considered as the ultimate objective of financial education and includes the following elements:

- Having control over one's finances in terms of being able to pay bills on time, not having unmanageable debt and being able to make ends meet.
- Having a financial "cushion" against unexpected expenses and emergencies.
- Having financial goals and being on track to meet those financial goals.
- Being able to make choices that allow one to enjoy life (OECD, 2020^[10]).

Source: OECD Council Recommendation on Financial Literacy (OECD, 2020^[9]), High-level Principles on National Strategies for Financial Education (OECD, 2012^[6]), OECD/INFE 2020 International Survey of Adult Financial Literacy (OECD, 2020^[10]), OECD/INFE Guidance on Digital Delivery of Financial Education (OECD, 2022^[6]), G20/OECD INFE Report on ensuring financial education and consumer protection for all in the digital age (OECD, 2017^[7]) and G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy (OECD, 2021^[2]).

The importance and relevance of digital financial literacy

Individuals with greater levels of digital financial literacy are better equipped to cope with the risks associated with digital finance, while also benefitting from the opportunities offered by digital financial services. Compared with individuals with limited levels of digital financial literacy, digitally financially literate individuals are expected to:

- Have a better access to and more appropriate use of digital financial services (DFS).
- Make more informed, conscious and responsible financial decision-making, resulting in an ability to choose DFS that best fit their needs.
- Be better able to cope with the increasing sophistication, complexity and rapid innovation of the digital financial sector.
- Have a better access to accurate, reliable and comprehensive information about the characteristics of DFS.
- Have a better awareness of consumer rights and redress procedures.
- Be empowered to react in case they fall victims to financial fraud in a digital context.

Furthermore, increased levels of digital financial literacy are expected to strengthen individual financial resilience and well-being (OECD, 2021^[2]), while contributing to sustainable and inclusive economic growth, through the following elements:

- Support the development of safe habits and sound decision-making in order to manage the risks related to DFS and digital tools. This will strengthen the ability of individuals to cope with negative financial shocks and avoid losing financial resources that can arise from financial frauds, cyber risks or a misuse of (financial) personal data. This will also support them to cope with the risks posed by the exacerbation of behavioural biases in a digital context (e.g. over-spending or over-indebtedness due to an easy access to digital payment or credit tools).
- Contribute to reducing digital financial exclusion.

- Support the development of budgeting strategies, making long-term goals and being on track to meet them by using reliable budgeting tools, including mobile apps or other online platforms, developed by impartial and reliable providers.
- Support financial planning and encourage saving for the short and long term through a better access to reliable tools that may facilitate saving decisions and prompt individuals to take action. Through a better access to different DFS and providers, this will also support the diversification of savings and investments.
- Contribute to financial stability through a better quality of decision-making at individual level, and by improving trust in digital finance and the financial system as a whole.

Beyond efforts to support individuals' digital financial literacy, it is worth noting that financial resilience and financial well-being also depend on other policies such as financial consumer protection as well as broader economic and social policies. Therefore, the Strategy complements broader efforts aimed at promoting a safe and inclusive financial system, such as financial inclusion and financial consumer protection policies and practices.

The need for a Digital Financial Literacy Strategy

Findings from the mapping report (OECD, 2023^[11]) show that the digital financial literacy of the Portuguese population overall appears limited in certain domains, such as the application of basic online safety measures, engagement in safe digital financial behaviours and attitudes, or aspects of digital financial knowledge.

Consistent with the 2020 OECD Recommendation on Financial Literacy (OECD, 2020^[9]), the establishment and implementation of a Strategy to improve digital financial literacy will support a co-ordinated approach to addressing the digital financial literacy needs of the Portuguese population. By improving digital financial literacy levels of the population over the medium and long term, the Strategy will contribute to improving the population's financial resilience and well-being while ultimately participating in improving trust and confidence in the digital and financial sectors which are key components of a stable and sustainable economy.

The Banco de Portugal, the Portuguese Securities Market Commission and the Insurance and Pension Funds Supervisory Authority together with public and private as well as not-for-profit stakeholders have started to address these issues through digital financial education initiatives. However, the current provision of digital financial education shows limits in certain domains, notably in terms of reach, content and coverage. A Strategy is needed to address gaps and challenges in digital financial education provision identified through the preparatory steps (see Box 2) by providing a coherent, evidence-based and long-term approach to digital financial literacy that involves all relevant stakeholders.

Addressing existing needs and gaps in digital financial education in Portugal

The Strategy is expected to address the main digital financial literacy needs of the Portuguese population as well as existing gaps and challenges in the provision of digital financial education. These were identified based on the findings from the mapping report (OECD, 2023^[11]).

Addressing digital financial literacy needs of the Portuguese population

The main identified digital financial literacy needs of the Portuguese population are:

- **The need to improve digital (financial) inclusion**, notably for certain sub-groups of the population. While the use of the Internet is widespread in Portugal, with the use of smartphones

more prevalent than that of computers, around one-quarter of the population does not use digital tools to perform certain daily activities or to engage with financial services. Findings from the mapping report show that half of the people who do not use the Internet consider that it is too complicated to use while almost one-third feel that they do not need it. The main reason mentioned for not shopping online or using home banking services is a preference for personal contact while the lack of awareness can be considered as one of the main reasons for not engaging with other DFS (such as using digital services for transferring money or E-wallets). Finally, among the population sub-groups that do not tend to use digital tools to perform certain daily activities or to engage with financial services, older adults -notably those aged 70 and over- or individuals with low income and/or education are over-represented.

- **The need to promote the application of basic safety practices when transacting online.** Although a majority of the Portuguese population appears to adopt certain safety procedures when using the Internet (for example when setting passwords or using adequate anti-virus software), findings from the mapping report highlighted that specific online safety procedures are followed to a limited extent. This is particularly true for safety measures that require acting regularly, such as updating passwords. Also, when using digital tools such as mobile applications, certain safety measures (such as verifying the access permissions granted when installing a new mobile application or verifying that such application comes from a trustworthy source) are not fully applied.
- **The need to enhance individuals' skills to protect their personal data when using digital tools.** Findings show that one-quarter of Internet users in Portugal do not read and make sure they understand privacy policy statements before providing personal data, while more than half never ask website administrators to delete their personal data when they no longer plan to use such websites. In addition, the number of people in Portugal who exercise caution when sharing information on social networks may be increased.
- **The need to improve certain components of digital financial knowledge.** Overall, less than half of Internet users are able to correctly answer most digital financial knowledge questions. A significant number of the Portuguese population has limited knowledge of its rights in an online environment as for example just more than one-third of Internet users is aware that an online purchase made in the European Union can be cancelled within 14 days. Less than half of Internet users are aware that generally the same requirements apply regardless of whether a financial activity is carried out online or in person, while 60% of Internet users are not aware that some online financial services providers may not be regulated by financial authorities in Portugal. Less than one-third of Internet users are aware that their personal data -notably those posted on social media- may be used by financial institutions. Last but not least, there is limited knowledge on crypto-assets, especially in terms of risks, regulation, or whether they are legal tender.
- **The need to support individuals to engage in safe digital financial behaviours and attitudes.** The average digital financial behaviour score in Portugal is 59 out of 100. This score -calculated for the purpose of the mapping report- highlights that certain safe behaviours when using digital financial services should be further supported. For example, people may be further encouraged to read information and disclosure requirements when buying a digital financial product. Furthermore, there is a need to spur people to look for information on the safe use of digital financial services and enable them to know where to get information about frequent financial scams and online frauds. Finally, efforts could be made to support people to adopt safe attitudes online, as many people tend to display less cautious or more impulsive attitudes when being online than when transacting in person. This is also the case regarding the use of public Wi-Fi connections when shopping online as only 60% of respondents are aware that this practice is unsafe.

Addressing gaps and challenges in the provision of digital financial education

The main identified gaps and challenges in the current provision of digital financial education are the following:

- There is a gap between the overall digital financial literacy needs of the Portuguese population and the actual number of individuals reached by existing digital financial education initiatives. The Strategy will aim to scale up the reach of existing initiatives and incentivise the development of new ones, for example through the involvement of new stakeholders.
- There is a gap between the content of digital financial education and some of the identified digital financial literacy needs among the population. The Strategy will aim to support providers of digital financial education in developing initiatives aligned with those needs, notably with regard to delivery method and content.
- The majority of existing digital financial education initiatives focus on young people. While continuing targeting young people is important, the Strategy will also support relevant stakeholders in addressing the needs of other socio-demographic groups, including seniors, people with low income and low education, or women.
- Many digital financial education initiatives consist of one-off events and campaigns which should be complemented with initiatives aiming at fostering longer-term behavioural change towards the safe use of digital financial services. The Strategy will encourage such initiatives.
- The evaluation of existing digital financial education initiatives is not systematic. Also, providers of digital financial education could leverage automatic features enabled by digital tools to automatically monitor the implementation of initiatives. The Strategy will aim at encouraging such practices.
- Stakeholders reported facing several challenges when delivering digital financial education, such as identifying and assessing digital financial literacy needs, designing initiatives, and implementing them in ways that are accessible to all the population. The Strategy will provide guidance on specific needs to be addressed when designing initiatives and suggests approaches to reach different groups of the population.

Complementing and supporting the existing policy agenda in Portugal

The Strategy will support and complement the implementation of other strategic national, EU and international policies in Portugal with a view to fostering economic and social prosperity. More specifically, it will:

- Be consistent with the National Plan for Financial Education. It will complement the guidelines that were adopted as part of the National Plan for 2021-25 and which aim at promoting digital financial education (CNSF, 2022^[11]).
- Support the Banco de Portugal's own strategic plan for 2021-25 in promoting digital financial education (Banco de Portugal, 2021^[12]).
- Complement existing national programmes to support the digital transition and digital skills of the Portuguese population, such as the Action Plan for Digital Transition (Portugal Digital, 2020^[13]).
- Contribute to the European Union Capital Markets Union Action Plan (European Union, 2020^[14]) through capital markets development, notably the Key Objective 1 to support a green, digital, inclusive and resilient economic recovery. It will also participate in the Action 7 of Objective 2 by empowering citizens through financial literacy.

- Contribute to other elements of the EU policy agenda, such as the EU Digital Finance Strategy (European Union, 2020^[15]), the EU Sustainable Finance Strategy and the European Green Deal, by promoting an understanding of the implications of saving and investment decisions on society and the environment, and of long-term economic and financial sustainability considerations in saving and investment decisions, including through digital financial services.
- Support the United Nations' 2030 Agenda for Sustainable Development Goals (SDGs) (United Nations, 2015^[16]). More specifically, it is expected to contribute to achieving Goal 4 on quality education and Goal 10 on reducing inequalities by promoting opportunities for lifelong learning and by contributing to robust and sound financial systems.

Box 2. Process to develop the Strategy

The process for developing the Strategy included consultation, co-ordination and information sharing between the various stakeholders. This ensured that the Strategy benefitted from the experience of Portuguese stakeholders from the public, private and not-for-profit sectors, and that the Strategy's main objectives and roadmap were adapted to Portugal's needs. Furthermore, the Strategy builds on data and evidence gathered at different stages of its development.

Firstly, a mapping of digital financial education provision in Portugal took place through a national stocktaking survey of stakeholders with an interest in digital financial education. The stocktaking questionnaire was distributed in December 2021 and responses were collected until January 2022. It was distributed by the Banco de Portugal to national stakeholders that were identified based on criteria such as their public or regulatory nature, their proven expertise, commitment, and credibility to deal with digital financial education issues, relevance of their activities to consumers, or their involvement as partners in the implementation of the existing financial education strategy in Portugal. Sixteen stakeholders in total responded to the survey and provided information on eighteen digital financial literacy initiatives.

Respondents were subsequently invited to participate in a national stakeholder workshop at the Money Museum of the Banco de Portugal on 8 March 2022. The workshop also gathered experts from the OECD Secretariat and the European Commission, representatives from the Banco de Portugal, as well as international delegates from the OECD International Network on Financial Education (OECD/INFE). Participants discussed the current provision of digital financial education initiatives in Portugal. A panel discussion among participants also explored the way forward and the relevance of the future strategy.

Following this, the OECD conducted a survey to assess the digital financial literacy of individuals in Portugal, covering many of the digital financial competences described in the financial competence framework for adults in the European Union (European Union/OECD, 2022^[17]). The survey investigated access and use of information and communication technologies (ICT), aspects of digital financial inclusion and use of digital financial services, and digital financial literacy levels of the population aged 16 and over in Portugal. Data was collected between July and September 2022 by the Portuguese Catholic University – *Centro de Estudos e Sondagens de Opinião* (CESOP), using face-to-face interviews on a representative sample of 1 516 respondents from the Portuguese population. Selected stratification criteria ensured representativeness in terms of age groups, gender, educational attainment, employment status, geographic region, and city size.

Building on the inputs offered via the stocktaking survey, stakeholder workshop, bilateral exchanges, and the digital financial literacy quantitative survey, the OECD developed the report "Digital financial literacy in Portugal: Relevance, evidence and provision" (i.e. the "mapping report") that was published on 5 April 2023 (OECD, 2023^[1]).

Finally, stakeholders were consulted in the preparation of the final Strategy during a virtual meeting on 5 April 2023. The meeting offered an opportunity to present and discuss the vision, objectives, and Implementation Roadmap of the Strategy.

2 Strategic Vision, Objectives and Governance

Vision of the Strategy

The Vision defines the expected long-term goals of the Strategy. The Vision of the Strategy is as follows:

Vision of the Strategy:

The Digital Financial Literacy Strategy aims to support people living in Portugal to develop the necessary knowledge, attitudes and behaviours to take advantage of opportunities related to the use of digital financial services and digital technologies while managing risks. Through a combination of efforts by relevant stakeholders to improve the digital financial literacy of the population, the Strategy also aims to support individual financial resilience and financial well-being while contributing to financial stability and the inclusive and sustainable development of the Portuguese economy and society.

The Vision recognises that both financial resilience and financial well-being are potential outcomes of digital financial literacy through, for example, a more informed and conscious financial decision-making by consumers in relation to DFS as well as through an increased ability to protect oneself from online financial frauds and scams.

The Vision also recognises the role of stakeholders and the importance of their co-ordination in improving the financial resilience and well-being of individuals.

In addition to benefitting the individuals and their households, the Vision acknowledges that higher digital financial literacy levels in Portugal are expected to have a positive impact at a societal level. In fact, it is expected that a digitally financially literate population will contribute to the implementation of key national, European, and international efforts to support the inclusive and sustainable development of the Portuguese economy and society.

Objectives of the Strategy

The Vision of the Strategy is supported by four inter-related Objectives. The Objectives relate to the desired changes in people's knowledge, behaviours and attitudes, the way stakeholders should deliver the initiatives as well as the principles to be followed by digital financial education initiatives and programmes. They are based on the analysis and evidence gathered in the preparation for the Strategy, including quantitative evidence and qualitative information from public, private and not-for-profit stakeholders (see Box 2).

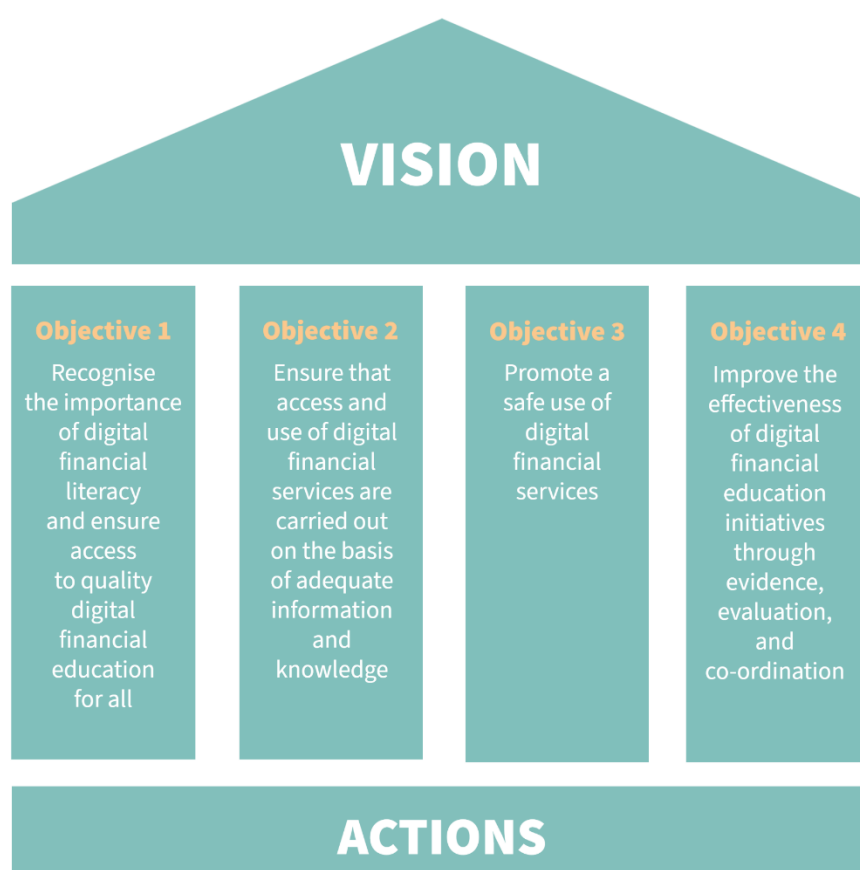
The Objectives of the Strategy are to:

- Recognise the importance of digital financial literacy and ensure access to quality digital financial education for all.
- Ensure that access and use of digital financial services are carried out on the basis of adequate information and knowledge.
- Promote a safe use of digital financial services.
- Improve the effectiveness of digital financial education initiatives through evidence, evaluation, and co-ordination.

The Objectives will be achieved by the Banco de Portugal and other stakeholders involved in the provision of digital financial education via a range of co-ordinated actions and long-term commitment. An overview of relevant actions to support the implementation of the Objectives is presented below, and then specific actions are set out in greater detail and granularity in the Implementation Roadmap.

The overall structure of the Strategy is summarised in Figure 1.

Figure 1. Structure of the Strategy



Objective 1: Recognise the importance of digital financial literacy and ensure access to quality digital financial education for all

Digital financial literacy is a relatively new topic on the global policy agenda. Therefore, there is a need to acknowledge its importance at a national level (Morgan and al., 2019^[18]) and mobilise the relevant actors to ensure an efficient and adequate implementation of the Strategy. In parallel, it is also important to promote digital financial literacy among the population and raise awareness of its importance.

The Strategy will aim to increase the reach of initiatives and encourage the launch of new ones where needed, including where there are gaps in coverage. The mapping report provided an overview of the number of actors involved in the provision of digital financial education as well as the number of individuals reached by such initiatives in 2019-21. It also showed that reach could be further increased given that large parts of the population have limited digital financial literacy (OECD, 2023^[11]).

Furthermore, it is important to ensure access to quality digital financial education for all, notably those most in need. In 2019-21, the majority of existing digital financial education initiatives focused on young people. While the youth population is important, more efforts should be devoted to address the specific needs of other socio-demographic groups such as seniors, people with low income and low education, women, as well as other groups that may be considered vulnerable, such as the unemployed, individuals living in small cities, migrants and people with disabilities. Finally, existing initiatives are mainly delivered in a digital way. Hence, the Strategy should encourage the development of approaches to reach digitally excluded individuals.

Overview of the actions that will contribute to the achievement of Objective 1:

- *Acknowledge the importance of digital financial literacy at national level, among policy makers and other stakeholders:* The Strategy puts forward the topic of digital financial literacy in the policy agenda at national level and advocates its importance with relevant stakeholders in various fora.
- *Make the population aware of the importance of digital financial literacy:* The Strategy raises awareness of the importance of digital financial literacy among the population and publicises the topic of digital financial literacy through various channels.
- *Increase the reach of digital financial education initiatives:* The implementation of the Strategy contributes to broadening the reach of digital financial education initiatives, notably via the involvement of stakeholders and through the development of new initiatives.
- *Use delivery channels tailored to the needs of the relevant target groups, while combating digital (financial) exclusion:* The Strategy encourages the use of a wide range of delivery channels to respond to the digital financial literacy needs of different audiences. It also encourages the development of approaches to reach digitally excluded individuals.

Objective 2: Ensure that access and use of digital financial services are carried out on the basis of adequate information and knowledge

Although the use of the Internet is widespread in Portugal, some population sub-groups such as adults aged 70 and over or individuals with low income and/or education are more likely to be excluded from the digital world. This may be due to a wide range of reasons but an important one is the lack of basic skills to cope with the perceived complexity of using digital tools. Consequently, many people do not use digital tools to perform certain daily activities or to engage with financial services. Moreover, certain population sub-groups are not using DFS due to a preference for personal contact, a lack of trust in digital tools and DFS, or simply because of a lack of awareness.

The Portuguese population using the Internet shows limited digital financial knowledge in several domains, as less than half of Internet users can provide the correct answer to most digital financial knowledge

questions (OECD, 2023^[11]). More specifically, there is a lack of awareness of consumer rights in an online environment, for example when shopping online. There is also a lack of knowledge about the regulation of DFS as well as possible implications of using DFS not regulated by national authorities. Furthermore, a limited proportion of Internet users in Portugal knows about the use of personal data by financial institutions and about pricing or marketing practices applied by online providers (such as customer profiling in the context of granting credit or insurance). There is also limited knowledge about crypto-assets, especially in terms of risks, whether they are regulated or have legal tender. Finally, when using DFS, significant parts of the population do not know where to get information about frequent financial scams and online frauds and have never looked for information on the safe use of DFS.

Overview of the actions that will contribute to the achievement of Objective 2:

- *Promote a higher take-up of DFS:* Although the low take-up of DFS cannot be addressed by digital financial education alone, the Strategy encourages actions contributing to tackle some of the main reasons why certain vulnerable parts of the Portuguese population do not use DFS or digital tools i.e. the perceived complexity, the preference for personal contact and the lack of trust.
- *Improve awareness of where and how to find reliable and impartial sources of information on the safe use of DFS:* The Strategy aims to raise the population's awareness on where to access reliable and impartial information on the main features and risks of DFS. In addition, the Strategy makes the main sources of reliable and impartial digital financial education on DFS easily accessible to the public.
- *Improve the digital financial knowledge of the population:* The Strategy encourages the provision of reliable information and the development of digital financial education initiatives covering areas in which the Portuguese population shows a lack of digital financial knowledge, such as the features of DFS, their providers and the related risks, consumer rights in an online environment or aspects related to the regulation of DFS (e.g. cross-border aspects, online/offline application of consumer protection rules).

In this context, greater effectiveness of digital financial education initiatives will be achieved by agreeing on a common framework of core digital financial literacy competencies based on national digital financial literacy evidence and priorities, and to be included in existing competency frameworks currently under development in Portugal. Core competency frameworks can be used to inform the implementation of the Strategy, improve programme design, identify gaps in provision, and support the creation of assessment, measurement and evaluation tools. The development of such frameworks could build on the existing OECD-INFE/European Union Financial Competence Framework for Adults in the EU (European Union/OECD, 2022^[17]) – which also includes digital financial competences – and take into account different age groups and relevant target audiences. The upcoming OECD-INFE/European Union Financial Competence Framework for children and youth in the EU could also be used to complement the review of Core Competencies for young people in Portugal.

Objective 3: Promote a safe use of digital financial services

Findings from the mapping report show that when transacting online and using DFS, the Portuguese population applies certain safe online behaviours to a limited extent. For example, there is a limited application of basic online safety measures -such as not using public Wi-Fi networks- when using DFS. There is also a tendency to consider safety measures as a one-off requirement, evidenced for example by a lack of regular change of passwords. Additionally, when shopping online, virtual cards, considered to be a safe online payment method, are still not as widespread as they could be (OECD, 2023^[11]).

While people access the Internet mostly through their mobile phone, findings show that the use of mobile applications may foster less cautious behaviours. For example, checking access permissions of apps and

assessing whether the app comes from a trustworthy source are not as widespread as they should (OECD, 2023_[1]). Also, as the use of mobile phones is often associated with multi-tasking, it may increase people's vulnerability to online frauds and scams, such as phishing and smishing (i.e. phishing via SMS).

In addition, the application of personal data protection measures by consumers when transacting online or using social networks may be improved in some areas. For instance, many people do not give enough importance to reading and understanding privacy policy statements before providing personal data, or do not ask website administrators to delete their personal data when they no longer plan to use such websites.

Finally, some people tend to adopt less cautious attitudes when transacting online than when resorting to traditional channels. For instance, one-third of online shoppers felt they made more impulsive purchases when buying online rather than in a shop (OECD, 2023_[1]).

Overview of the actions that will contribute to the achievement of Objective 3:

- *Improve digital financial behaviours and attitudes:* Given the interlinkages between digital literacy and DFS, the Strategy is used to bridge the gap between these two domains and find relevant synergies, thus contributing to improving basic safety online skills of the Portuguese population. In this regard, it takes into account the different devices used to navigate online. The Strategy also promotes digital financial education initiatives that raise awareness about personal data protection-related issues in a personal finance context. The Strategy promotes individual behavioural change when managing personal data, notably when using social media. The Strategy also promotes safe behaviours that minimise the risk of exposure to online frauds and scams. It therefore raises awareness of the importance to read and understand information and disclosure documents when using DFS. Finally, it encourages individuals to look for information about the safe use of DFS as well as information on frequent financial scams and online frauds.
- *Encourage financial consumers to assert their rights:* The Strategy promotes appropriate behaviour when DFS users fall victim to online financial frauds and scams. The Strategy supports them to know where and how they can obtain redress if needed.
- *Raise the population's awareness of behavioural biases when using financial products and services through digital channels:* The Strategy aims to raise DFS users' awareness on the most important behavioural biases that may have an impact on personal financial decisions, including online. Furthermore, it promotes digital financial education initiatives that aim to mitigate those biases.

Objective 4: Improve the effectiveness of digital financial education initiatives through evidence, evaluation, and co-ordination

Many public, not-for-profit and private stakeholders in Portugal strongly engage in forms of co-operation in the design or delivery of digital financial education initiatives. However, most stakeholders involved in the provision of digital financial education do not evaluate their initiatives (OECD, 2023_[1]). Different challenges can explain the low number of initiatives being evaluated, such as the difficulty to assess the effectiveness and the impact of the initiative provided, or the difficulty to define and implement monitoring and evaluation metrics. Therefore, there should be more focus on systematically evaluating digital financial education initiatives.

Also, while the majority of providers monitor the implementation of their initiatives, only a few initiatives delivered digitally monitor their implementation through automated means (such as automated collection of indicators like the number of participants, registrations, subscribers, website/platform views, training sessions carried out, certifications given). When delivered digitally, digital financial education initiatives could make a better use of automatic monitoring.

Finally, the Strategy should ensure that its implementation is evidence-based and that it builds on the latest advances in digital financial literacy research. Therefore, research and data collection on digital financial literacy, through enhanced collaboration between relevant stakeholders, should be encouraged.

Overview of the actions that will contribute to the achievement of Objective 4:

- *Encourage the evaluation of digital financial literacy initiatives through co-ordinated approaches:* The Strategy proposes the adoption of guidelines to encourage providers of digital financial education to systematically assess the impact and effectiveness of their initiatives. In this regard, it encourages automatic monitoring through the use of the analytical features of digital tools, the pooling of resources and the dissemination of findings. It encourages providers of digital financial education to take the results of monitoring and evaluations into account in order to ensure that digital financial education initiatives are aligned with the Strategy's objectives, its Implementation Roadmap and related yearly action plans. The Strategy also encourages providers of digital financial education to ensure that initiatives' content is tailored and adapted to the learner, up to date with respect to the evolution of the financial landscape, and that delivery methods are effective.
- *Enhance collaboration to conduct research and continue to collect evidence on levels of digital financial literacy:* The Strategy ensures that its implementation is evidence-based and that it benefits from the latest advances in digital financial literacy research. It aims to understand what drives digital financial norms, habits, attitudes, and behaviours of the population in Portugal and what determines the formation of attitudes and behaviours from a young age, which could allow the design of digital financial education initiatives that are more consumer-centric and have a higher impact.

Important steps in developing or reviewing sound strategies to ensure that digital financial education initiatives can build and sustain financial resilience and well-being in the short and long term may be to continue to advance the policy and research debate on digital financial literacy, to collect data and evidence on groups at risk of digital financial vulnerability or exclusion, and to evaluate the impact of existing digital financial education initiatives. In this regard, the Strategy encourages benchmarking against digital financial literacy and digital financial inclusion initiatives in similar jurisdictions, and collaboration with other regional and international regulators on best practices in those jurisdictions. Although Portugal is at the forefront with regard to digital financial literacy matters, the current development of the OECD/INFE toolkit to measure digital financial literacy and the subsequent international survey to be conducted could provide an insightful exercise for future benchmarking.

Governance of the Strategy

Leading entity

In line with the OECD Recommendation on Financial Literacy (OECD, 2020^[9]), the Strategy should be led by a credible and unbiased authority, recognised at the highest policy level, with the responsibility for initiating, developing and monitoring the Strategy.

It is proposed that the Banco de Portugal will be the leading authority for the implementation, monitoring and evaluation of the Strategy.

The Banco de Portugal, having been closely involved in the development and implementation of the Project and consulted at all major stages of the activities to be implemented, is committed to taking the necessary actions through its internal mechanisms. The Banco de Portugal is committed to implementing the work

contained in the Implementation Roadmap with a view to facilitating the achievement of the Strategy's Vision and Objectives.

The Strategy will contribute to the implementation of the National Plan for Financial Education. In the implementation of the Strategy to improve digital financial literacy, the Banco de Portugal will co-operate and co-ordinate when relevant with the other permanent members of the National Council of Financial Supervisors i.e. the Securities Market Commission (CMVM) and the Insurance and Pension Funds Supervisory Authority (ASF). Moreover, the Banco de Portugal will co-operate and co-ordinate, including through formal agreements, with other relevant stakeholders from the public, private and not-for profit sector for the implementation of the Strategy.

Main responsibilities of the leading entity

The Banco de Portugal's responsibilities include:

- Acting as the main reference point for stakeholders to provide relevant updates and discuss topics that are relevant to digital financial literacy policy in Portugal.
- Elaboration of proposals and discussion of the design and implementation of initiatives to meet the Objectives of the Strategy.
- Provision of guidance to be applied by individual programmes implemented by Portuguese stakeholders, in accordance with the Strategy's Implementation Roadmap.
- Implementation of its own digital financial education initiatives.
- Development of yearly action plans for the implementation of the Strategy.
- Monitoring and evaluation of the Strategy. Advances in the implementation of the Strategy including results of monitoring and evaluation of initiatives will be communicated through an annual report.
- Organisation or co-ordination of events contributing to the Objectives of the Strategy.

Timescale of the Strategy and its Implementation Roadmap

The Strategy has long-term goals. Its Implementation Roadmap has a duration of five years and should therefore be subject to an evaluation five years after its adoption. This does not imply that all Objectives and related actions need to be achieved within five years, but rather that an evaluation could take place within this timeframe to assess whether the Objectives and related actions are still relevant. The Strategy itself may also be subject to an evaluation exercise.

The actions included in successive Implementation Roadmaps may change more often than the Strategy itself. If achieved or completed, actions can be substituted by new ones, which should contribute to the Vision and Objectives of the Strategy.

Monitoring and evaluation of the Strategy

Monitoring and evaluation of the Strategy are essential to assess its progress and propose evidence-based improvements accordingly (OECD, 2020^[91]). The Strategy recognises the importance of monitoring and evaluation processes as an integral part of its implementation. In addition, the Strategy distinguishes the monitoring and evaluation of individual digital financial education initiatives from the monitoring and evaluation of the overall Strategy.

Monitoring and evaluation of individual digital financial education initiatives

Monitoring and evaluation of initiatives are important to understand what initiatives are effective, for example in supporting behavioural changes. Therefore, it is recommended that the stakeholders involved in the provision of digital financial education under the Strategy's umbrella monitor the implementation and evaluate the effectiveness of their initiatives, to the extent possible and based on available resources.

The monitoring and evaluation of individual digital financial education initiatives will feed into the monitoring and evaluation of the overall Strategy.

Monitoring of the overall Strategy

Monitoring the progress of the Strategy will be achieved through the monitoring of its Implementation Roadmap against its related yearly action plans, developed by the Banco de Portugal. Yearly action plans will identify the actions and respective indicators to be achieved as well as stakeholders responsible for their implementation.

Each yearly action plan will be monitored against the agreed indicators. At the end of each year, actions which are achieved or completed, may be continued or replaced by new ones. Actions that are pending, not completed, or that are planned to span several years may be carried forward for implementation in the following years.

Evaluation of the overall Strategy

Thinking about evaluation early on, while preparing and drafting the Strategy, is a way to ensure its effectiveness and accountability (OECD, 2022^[19]). However, it should be recognised that evaluating the Strategy against its Objectives is a challenging process. For example, measuring progress in behaviour and/or attitudes or individual financial well-being may be difficult to quantify. Also, certain changes may be due to a wide range of personal or macroeconomic factors, hence going beyond the outcomes of digital financial education as such.

Nevertheless, the Strategy will be evaluated against its Objectives by using a variety of sources of evidence that will be collected throughout the lifetime of the Strategy, as well as data specifically collected with an evaluation of the Strategy in mind. The Strategy will be ideally evaluated quantitatively, through surveys and collection of evaluation evidence from providers of digital financial education initiatives, and qualitatively, through consultations with stakeholders. A possible engagement of professional and external evaluators to either provide guidance or complete the entirety of the process of evaluating the Strategy could also be envisaged. The evaluation of the Strategy will be done through a combination of:

- The results and lessons learned from the monitoring of the yearly action plans, and the evaluation and monitoring of the Objectives as well as actions included in the Implementation Roadmap (with the possible use of indicators – see Table A 2).
- The results and lessons learned from the monitoring and evaluation of individual digital financial education initiatives and programmes (regarding their content, delivery method, reach, etc.) and their achieved outcomes against the Strategy's Objectives.
- Quantitative analysis through regular data collection exercises on digital financial literacy of adults and/or population sub-sets, including the participation in international cross-comparable exercises (e.g. through the OECD/INFE) and the organisation of national surveys.
- Assessment of the effectiveness of the co-ordination of the Strategy in achieving its desired Objectives, facilitating sharing of resources, and avoiding duplication.

- Qualitative data from exchanges with stakeholders which can provide important details and allow an understanding of issues that may be challenging in the process of implementation.

Evaluation findings of the Strategy will be clearly communicated to relevant stakeholders and the public.

3 Implementation Roadmap (2023-28)

The Implementation Roadmap sets out a framework for implementing the Strategy over the period 2023-28. It offers guidance to the Banco de Portugal and other stakeholders about a range of specific actions that will contribute to the achievement of the Strategy's Vision and Objectives. Importantly, it also indicates target groups of the population to be prioritised during this period.

The Implementation Roadmap is intended to be complemented by yearly action plans to be developed by the Banco de Portugal, following consultation with relevant stakeholders if necessary. The yearly action plans would identify specific projects to be undertaken over the course of a year, together with suggested performance indicators. The yearly action plans could also identify relevant stakeholders to be involved and include budgetary commitments.

Priority target groups for the Implementation Roadmap (2023-28)

The Implementation Roadmap of the Strategy identifies priority target groups for digital financial education initiatives for the period 2023-28. These priority target groups have been selected on the basis of the findings of the mapping report (OECD, 2023^[11]). The selection takes into account the levels of digital financial literacy, the risk of exposure to online scams/frauds, digital and financial inclusion aspects, the size of the target group as well as the current provision of financial education targeting each group.

The priority target groups for the Implementation Roadmap are:

- **Young people:** The younger generation – in particular those aged between 16 and 24 – makes extensive use of the Internet and digital tools. Young people engage not only in relatively basic digital financial activities such as shopping online or using home banking, but also in riskier ones, such as acquiring and trading crypto-assets. Although this population can generally be considered as more tech-savvy than older generations, it faces specific vulnerabilities when using DFS and often does not have the perception of the associated risks. Young people are also less likely than people in middle age to apply certain data protection measures, especially when using social media, and to report when being victim of an online financial fraud. Finally, young people lack digital financial knowledge, as their score in this area is lower than their digital financial attitude and behaviour scores.
- **Older adults:** The population aged 55 and over – and especially those aged 70 and over – uses the Internet and digital tools to a limited extent. For those who do not use them, complexity is considered as the main reason for not doing so. In this regard, older adults are more likely to be digitally excluded than the rest of the population. When using the Internet, this group shows a high exposure to online risks, as older adults are less prone than other population sub-groups to know and apply basic safety procedures. Older adults also appear more vulnerable than middle-aged adults in protecting their personal data when online. Regarding DFS, older adults have limited awareness and use compared to other Internet users. When using DFS, they display the lowest digital financial knowledge scores across age groups. Finally, many older adults using DFS do not apply basic cautious behaviours, as further evidenced by lower scores than the overall population on digital financial behaviour.

- **Individuals with low income and/or low education:** Both of these groups have low levels of digital (financial) inclusion relative to the broader population. Complexity is given as one of the main reasons why many in these groups do not use digital tools. When transacting online, many people in these population sub-groups tend not to apply basic online safety procedures and show significant gaps in all aspects of digital financial literacy (i.e. digital financial knowledge, attitudes and behaviour).
- **Women:** While there are no gender differences in a range of aspects (such as digital inclusion, use of digital tools, online safety or exposure to online frauds and scams, among others), there are gender differences in other areas, such as the willingness to look for information on the safe use of DFS (relatively more women than men have never looked for such information) or in the levels of digital financial knowledge (with women showing lower levels than men).
- **Other groups that may be considered vulnerable:** The unemployed are the population group with the highest proportion of victims of online fraud. Individuals living in small cities use the Internet and digital tools less than those who live in big cities, as evidenced by a lower digital use score. In addition, even if the mapping report does not present results by migration status, migrants have been identified by stakeholders as being particularly vulnerable. They are currently not targeted by any dedicated DFE initiative, hence motivating the inclusion of this group as a target of the Strategy. Finally, stakeholders also mentioned people with disabilities as a group that should deserve particular attention.

While the Implementation Roadmap will start focusing on these priority groups, some of them may continue to be targeted over a longer period depending on their needs. Furthermore, most of the actions proposed under the Implementation Roadmap will benefit all groups in society.

Actions to implement the Strategy's Objectives (2023-28)

This section sets out a range of specific actions corresponding to each Objective, which are expected to be implemented within the first five years after the adoption of the Strategy.

These actions can be applied in relation to any target group and/or digital financial education initiative, but as noted, some may be more focused on the target groups identified in the previous section. Furthermore, while certain actions may be performed in a rather short-term timeframe, others may take longer to be implemented. Indeed, the implementation of many actions may be conditioned by the availability and involvement of stakeholders or by the financial and human resources allocated. To reflect these considerations, the Implementation Roadmap allocates an indicative timeframe to most proposed actions. The target groups as well as timeframe for the actions are indicated in Table A 1.

Finally, the Implementation Roadmap identifies performance indicators linked to the Strategy's Objectives and the related actions that may be used for monitoring and evaluation purposes. The list of performance indicators can be found in Table A 2.

Objective 1: Recognise the importance of digital financial literacy and ensure access to quality digital financial education for all

Actions to acknowledge the importance of digital financial literacy at national level, among policy makers and other stakeholders

- Make the Objectives of the Strategy known at relevant governmental levels and share relevant material about the Strategy and its subsequent outputs (action plans, annual reports, etc.) to relevant government and public agencies as well as other stakeholders.

- Mobilise and encourage the commitment of relevant governmental and public agencies in the implementation of the Strategy through the signature of co-operation agreements/protocols/Memoranda of Understanding, etc.
- Advocate for the allocation of public resources for the design, development, and implementation of digital financial education initiatives.
- Advocate the importance of digital financial literacy in national fora.
- Advocate the importance of digital financial literacy in national and global events such as the Global Money Week, the World Investor Week, the national Financial Education Week, the European Retirement Week, the International Day for Older Persons and other relevant national and international events.

Actions to make the population aware of the importance of digital financial literacy

- Insert and regularly update a dedicated section or tab on digital financial literacy on the Bank Customer Website of the Banco de Portugal and/or the *Todos Contam* website.
- Create a dedicated channel for digital financial literacy content on the YouTube *Todos Contam* account and/or the YouTube account of the Banco de Portugal.
- Raise the visibility of the Bank Customer Website of the Banco de Portugal and the *Todos Contam* website and its content related to digital financial literacy on social media by creating and actively managing an account on Instagram and/or Twitter. Related to this, create a hashtag that is clear, actionable, and easy to read. Relevant stakeholders will be invited to use it consistently in all their social media publications taken under the umbrella of the Strategy.
- Consider the development of a Chat bot for the *Todos Contam* and/or the Bank Customer Website of the Banco de Portugal and include digital financial literacy content in the knowledge base of the Chat bot.
- Continue raising awareness on issues of relevance to digital financial consumers such as new DFS, online financial scams and frauds, warnings on specific products or providers, etc. in national and global events related to financial issues such as the Global Money Week, the World Investor Week, the Financial Education Week and the World Consumer Rights Day and/or through the organisation of communication campaigns.

Actions to increase the reach of digital financial education initiatives

- Encourage greater stakeholder participation in DFE initiatives, either existing or new where needed, through the long-term involvement of stakeholders that have an interest in supporting digital financial literacy. Stakeholders may include public authorities (such as the National Data Protection Commission, the Ombudsman, local authorities such as Associations of Municipalities and Associations of Parish Councils, the Regional Co-ordination and Development Commissions, etc.), financial associations (such as the Portuguese Banking Association, the Association of Specialised Credit Institutions, the Portuguese Association of Investment Funds, Pensions and Assets, the Portuguese Association of Insurance Companies), NGOs, research institutions, etc.
- Promote teaching of DFE in schools through curricular and extra-curricular activities and special events for children and students through for example:
 - Highlighting digital financial literacy in the *Todos Contam* competition by including a specific school and/or teacher award for DFE projects through the addition of a specific topic related to digital financial literacy in the yearly application requirements.

- Considering the organisation of a hackathon to develop an open-source tool, platform or app which enhances digital financial literacy.
- Organising communication campaigns (posters, brochures, etc.) in places where students live (e.g. halls of residences, boarding facilities for students, etc.)
- Encourage the development of DFE initiatives targeting parents or guardians, and that can be delivered digitally, with the support of the school environment.
- Publicise all reliable DFE initiatives in a dedicated area of the Banco de Portugal's customer website and/or *Todos Contam* website (see also the specific actions related to the creation of a database under Objective 2).

Actions to use delivery channels tailored to the needs of the relevant target groups, while combating digital (financial) exclusion

- Explore the use of fun and entertaining elements in DFE initiatives delivered digitally where appropriate, for instance, through gamification or edutainment.
- Take behavioural biases into account when designing and delivering financial education interventions.
- Encourage providers of digital financial education to design and complement initiatives with traditional media such as TV, radio or printed material when they are targeting specific audiences with limited digital (financial) skills such as seniors, or those with low income or education.
- Co-operate with the media through, for example, contributions to the content of TV shows or articles in the press.
- Identify and establish regular communication channels with touchpoints who can support digital financial education. Such touchpoints may include public administration employees in branches of key public services (especially those working with vulnerable groups for example as part of municipal social welfare programmes and projects), employees of the Banco de Portugal regional offices, social workers, journalists, public libraries, etc. Then, empower identified touchpoints through dedicated trainings and workshops -in person or digital- to gain knowledge and confidence in digital financial matters in order to advance the digital financial literacy of targeted groups.
- Identify and establish regular communication channels with potential intermediaries who could facilitate the participation of vulnerable people in digital financial education. This may include a range of not-for-profit, social and welfare organisations or senior associations (such as the Portuguese Association of Pensioners and Retirees, etc.). This may also include those taking care of the older population (caregivers, health institutions, Parish councils, municipal day-care centres, retirement homes, senior universities, etc.).
- Identify and publicise good practices on designing and delivering DFE to seniors.

Objective 2: Ensure that access and use of digital financial services are carried out on the basis of adequate information and knowledge

Actions to promote a higher take-up of DFS

- Promote and encourage DFE initiatives that cover the use of the most basic DFS and/or digital tools (e.g. payment accounts with basic features, basic online banking, features offered by financial institutions to secure online payments, etc.).

- Develop partnerships and synergies with existing entities or programmes involved in digital inclusion and/or the development of adults' digital skills (such as the Creative Communities for Digital Inclusion, the High Commission for Migration, etc.) in order to include digital financial skills in existing programmes as relevant.
- Develop a partnership with the National Institute for Rehabilitation in order to enhance usability and accessibility of the Bank Customer Website of the Banco de Portugal and/or the *Todos Contam* website interface design.

Actions to improve awareness of where and how to find reliable and impartial sources of information on the safe use of DFS

- Support the development of DFE initiatives (such as dedicated digital and in-person training and workshops, events, awareness campaigns, etc.) on where to find impartial information on DFS (e.g. features of products, rights of consumers, redress mechanisms) and related risks.
- Support the development of DFE initiatives in schools (such as dedicated digital and in-person training and workshops, events, awareness campaigns, etc) highlighting that information available on the Internet and social media (e.g. influencers) may be misleading and not reliable.
- Support the population in accessing reliable and impartial sources of digital financial education on DFS through:
 - The creation of an easily accessible and centralised database or register of identified reliable providers of digital financial education, trusted initiatives per topic and target audience, etc.
 - Making this database easily accessible on a dedicated webpage or on a tab on the Banco de Portugal and/or *Todos Contam* websites under a clear and catchy title such as “Where can I educate myself on digital finance?”.
- Support the population in accessing reliable and impartial information on regulated DFS providers by creating a centralised and easily accessible database of those providers.

Actions to improve the digital financial knowledge of the population

- Encourage, support, and organise DFE initiatives (such as dedicated digital and in-person training and workshops, events, awareness campaigns, etc.) raising awareness of the population on the following topics:
 - The main features of DFS, their providers and the related risks. This includes innovative products such as crypto-assets and other blockchain-based products, focusing in particular on the risks and regulatory aspects. It also includes raising awareness on the digital euro, in case it is adopted.
 - Consumer rights in an online environment and the regulatory aspects of DFS. DFE initiatives should cover aspects related to the awareness of relevant supervisory authorities, the application of financial consumer protection rules in online and offline environments, the right to transparent information, the right to cancel an online purchase, where and how to make a complaint, redress procedures, etc.
 - The cross-border implications of DFS covering knowledge related to how and where to find the origin of a DFS provider, awareness about the implications of purchasing DFS authorised in other EU and non-EU jurisdictions, etc.

- The existence and the use of reliable and impartial digital tools, notably those which may be relevant for promoting saving behaviour and for individual financial resilience i.e. budgeting tools, comparison tools, etc.

Objective 3: Promote a safe use of digital financial services

Actions to improve digital financial behaviours and attitudes

- Integrate the following topics in existing -or new where needed- DFE initiatives (such as online awareness campaigns, digital and in-person trainings and workshops):
 - Basic safety procedures to be followed online (e.g. how to set strong passwords for different accounts and change them regularly, how to ensure one uses secure websites and mobile applications, etc.) while taking into account the different devices used to navigate online.
 - The most common online financial frauds and scams (such as shoulder surfing, phishing and pharming). In this regard, the use of real-life examples of online financial scams and frauds (e.g. real stories of everyday scams and phishing attacks, examples of positive actions taken, etc.) should be encouraged.
 - The importance of reading and understanding privacy policy statements before providing personal data, including on social media, and the use of personal data by financial services providers (profiling, credit scoring) as well as the related risks (exclusion, exposure to frauds and scams).
 - Examples of discretionary actions to be taken to protect personal data (for example asking websites to delete one's data, limiting access to personal data on social media, exploring data and privacy settings, etc.).
 - The importance of reading and understanding information and disclosure documents when using DFS. When possible, the use of behavioural insights to educate individuals on how to read financial information should be encouraged.
- Develop a campaign to provide basic information and warnings in public places where people may engage in financial transactions online through public Wi-Fi. This can be done through the Portuguese Hotels Association, Airports of Portugal and the National Association of Portuguese Municipalities for instance.
- Liaise and develop partnerships with the National Cybersecurity Centre and with the National Commission for the Protection of Data (CNPD). Such partnerships could result in the participation in events related to digital safety (e.g. the Cybersecurity Month) or to data protection (e.g. the Data Protection Day).

Actions to encourage financial consumers to assert their rights

- Promote and encourage online awareness campaigns as well as digital and in-person trainings and workshops that encourage the reporting of online financial frauds and scams, that provide information on how to do so, and that highlight why reporting frauds and scams matters, taking into account the reasons why individuals may not always report fraud (e.g. the feeling that it would not make a difference or a lack of awareness of where and how to do so).
- Raise awareness of the public authorities and other relevant entities (such as the Police, the Cybercrime Office of the Prosecutor General's Office, the Portuguese Association for Consumer Protection, the Portuguese Association for Victim Support, etc.), using several channels, to which individuals can report digital frauds and scams, seek help, complain and obtain redress.

Actions to raise the population's awareness of behavioural biases when using financial products and services through digital channels

- Promote and encourage online awareness campaigns as well as digital and in-person trainings and workshops that:
 - Raise DFS users' awareness on the impacts of advertising and peer pressure when making personal financial decisions online.
 - Raise DFS users' awareness and mitigate some of the behavioural biases amplified by digital tools (e.g. impulsive buying, ease of use that may lead to overspending, etc.) and social media (e.g. fear of missing out, herding behaviour, etc.). In this regard, DFE initiatives could consider 'debiasing' trainings and workshops using games, or videos and plays, where users can see real life examples of biases and feel a personal and emotional involvement.

Objective 4: Improve the effectiveness of digital financial literacy initiatives through evidence, evaluation, and co-ordination

Actions to encourage the evaluation of digital financial education initiatives through co-ordinated approaches

- Develop monitoring and evaluation guidelines to promote the collection of standardised information and incentivise their adoption and usage. The guidelines should notably encourage providers of DFE to:
 - Monitor and evaluate their DFE initiatives in a systematic way.
 - Report findings to the Banco de Portugal on a yearly basis under a pre-defined agenda.
 - When initiatives are delivered online, encourage automatic monitoring through the use the analytical features of digital tools, while ensuring full respect of data privacy.
 - When possible, consider the use of external independent professional evaluators, including research institutions and academia.
 - When possible, pool resources to evaluate the relevance and efficiency of DFE initiatives.
 - Share knowledge and mutual learning.
- Facilitate the dissemination of evaluation findings and best practices through a dedicated chapter in the annual report mentioned in "Main responsibilities of the leading entity".

Actions to enhance collaboration to conduct research and continue to collect evidence on levels of digital financial literacy

- Promote enhanced partnerships between public, private and research institutions to further understand digital financial attitudes and behaviours of the Portuguese population through in-depth data collection exercises and research on specific sub-groups of the population.
- Collect digital financial literacy data at regular intervals for the purpose of monitoring the impact of the Strategy and as input to DFE initiatives. In this regard, participation in international surveys to measure digital financial literacy -such as those conducted by the OECD/INFE- will be encouraged.

Annex A. Summary of Actions

This Annex provides an overview of the Objectives of the Strategy and the actions as set out in the Implementation Roadmap to achieve the Objectives. For each action, it indicates:

- The corresponding target group(s): relevant target groups include “youth”, “older adults”, “individuals with low income/low education”, “women” and “other groups”. When an action is applicable to all population groups, this is indicated as “whole population”.
- In addition, some actions are mainly targeted at “stakeholders”. In this context, stakeholders refer to public, not-for-profit and private stakeholders, as distinct from target groups within the population. Examples of relevant actions targeted at stakeholders include acknowledging the importance of digital financial literacy among policy makers and stakeholders as well as those related to the co-ordination of initiatives between stakeholders, etc.
- The timeframe for implementation: “short term” vs “medium term”.

Table A 1. Summary of actions

Objectives, actions, target groups and timeframe for implementation

Objectives	Actions	Target groups	Timeframe
Objective 1 Recognise the importance of digital financial literacy and ensure access to quality digital financial education for all	Actions to acknowledge the importance of digital financial literacy at national level, among policy makers and other stakeholders		
	<ul style="list-style-type: none"> Make the Objectives of the Strategy known at relevant governmental levels and share relevant material about the Strategy and its subsequent outputs (action plans, annual reports, etc.) to relevant government and public agencies as well as other stakeholders. 	Stakeholders	Short term
	<ul style="list-style-type: none"> Mobilise and encourage the commitment of relevant governmental and public agencies in the implementation of the Strategy through the signature of co-operation agreements/protocols/Memoranda of Understanding, etc. 	Stakeholders	Medium term
	<ul style="list-style-type: none"> Advocate for the allocation of public resources for the design, development, and implementation of digital financial education initiatives. 	Stakeholders	Medium term
	<ul style="list-style-type: none"> Advocate the importance of digital financial literacy in national fora. 	Stakeholders	Short term
	<ul style="list-style-type: none"> Advocate the importance of digital financial literacy in national and global events such as the Global Money Week, the World Investor Week, the national Financial Education Week, the European Retirement Week, the International Day for Older Persons and other relevant national and international events. 	Whole population	Short term
	Actions to make the population aware of the importance of digital financial literacy		
	<ul style="list-style-type: none"> Insert and regularly update a dedicated section or tab on digital financial literacy on the Bank Customer Website of the Banco de Portugal and/or the <i>Todos Contam</i> website. 	Whole population	Short term
	<ul style="list-style-type: none"> Create a dedicated channel for digital financial literacy content on the YouTube <i>Todos Contam</i> account and/or the YouTube account of the Banco de Portugal. 	Whole population	Short term
	<ul style="list-style-type: none"> Raise the visibility of the Bank Customer Website of the Banco de Portugal and the <i>Todos Contam</i> website and its content related to digital financial literacy on social media by creating and actively managing an account on Instagram and/or Twitter. Related to this, create a hashtag that is clear, actionable, and easy to read. Relevant stakeholders will be invited to use it consistently in all their social media publications taken under the umbrella of the Strategy. 	Young people	Short term
	<ul style="list-style-type: none"> Consider the development of a Chat bot for the <i>Todos Contam</i> and/or the Bank Customer Website of the Banco de Portugal and include digital financial literacy content in the knowledge base of the Chat bot. 	Whole population	Medium term
	<ul style="list-style-type: none"> Continue raising awareness on issues of relevance to digital financial consumers such as new DFS, online financial scams and frauds, warnings on specific products or providers, etc. in national and global events related to financial issues such as the Global Money Week, the World Investor Week, the Financial Education Week and the World Consumer Rights Day and/or through the organisation of communication campaigns. 	Whole population	Short term

Objectives	Actions	Target groups	Timeframe
Actions to increase the reach of digital financial education initiatives			
	<ul style="list-style-type: none"> Encourage greater stakeholder participation in DFE initiatives, either existing or new where needed, through the long-term involvement of stakeholders that have an interest in supporting digital financial literacy. Stakeholders may include public authorities (such as the National Data Protection Commission, the Ombudsman, local authorities such as Associations of Municipalities and Associations of Parish Councils, the Regional Co-ordination and Development Commissions, etc.), financial associations (such as the Portuguese Banking Association, the Association of Specialised Credit Institutions, the Portuguese Association of Investment Funds, Pensions and Assets, the Portuguese Association of Insurance Companies), NGOs, research institutions, etc. 	Stakeholders	Medium term
	<ul style="list-style-type: none"> Promote teaching of DFE in schools through curricular and extra-curricular activities and special events for children and students through for example: <ul style="list-style-type: none"> Highlighting digital financial literacy in the <i>Todos Contam</i> competition by including a specific school and/or teacher award for DFE projects through the addition of a specific topic related to digital financial literacy in the yearly application requirements. Considering the organisation of a hackathon to develop an open-source tool, platform or app which enhances digital financial literacy. Organising communication campaigns (posters, brochures, etc.) in places where students live (e.g. halls of residences, boarding facilities for students, etc.) 		
		Youth	Short term
		Youth	Short term
		Youth	Short term
	<ul style="list-style-type: none"> Encourage the development of DFE initiatives targeting parents or guardians, and that can be delivered digitally, with the support of the school environment. 	Youth	Medium term
	<ul style="list-style-type: none"> Publicise all reliable DFE initiatives in a dedicated area of the Banco de Portugal's customer website and/or <i>Todos Contam</i> website (see also the specific actions related to the creation of a database under Objective 2). 	Whole population	Medium term
Actions to use delivery channels tailored to the needs of the relevant target groups, while combating digital (financial) exclusion			
	<ul style="list-style-type: none"> Explore the use of fun and entertaining elements in DFE initiatives delivered digitally where appropriate, for instance, through gamification or edutainment. 	Youth	Short term
	<ul style="list-style-type: none"> Take behavioural biases into account when designing and delivering financial education interventions. 	Whole population	Medium term
	<ul style="list-style-type: none"> Encourage providers of digital financial education to design and complement initiatives with traditional media such as TV, radio or printed material when they are targeting specific audiences with limited digital (financial) skills such as seniors, or those with low income or education. 	Older adults Low income-low education Other groups	Medium term
	<ul style="list-style-type: none"> Co-operate with the media through, for example, contributions to the content of TV shows or articles in the press. 	Older adults Low income – low education Other groups	Medium term
	<ul style="list-style-type: none"> Identify and establish regular communication channels with touchpoints who can support digital financial education. Such touchpoints may 	Stakeholders	Medium term

Objectives	Actions	Target groups	Timeframe
	include public administration employees in branches of key public services (especially those working with vulnerable groups for example as part of municipal social welfare programmes and projects), employees of the Banco de Portugal regional offices, social workers, journalists, public libraries, etc. Then, empower identified touchpoints through dedicated trainings and workshops -in person or digital- to gain knowledge and confidence in digital financial matters in order to advance the digital financial literacy of targeted groups.	Older adults Low income – low education Other groups	
	<ul style="list-style-type: none"> Identify and establish regular communication channels with potential intermediaries who could facilitate the participation of vulnerable people in digital financial education. This may include a range of not-for-profit, social and welfare organisations or senior associations (such as the Portuguese Association of Pensioners and Retirees, etc.). This may also include those taking care of the older population (caregivers, health institutions, Parish councils, municipal day-care centres, retirement homes, senior universities, etc.). 	Stakeholders Older adults Low income – low education Other groups	Medium term
	<ul style="list-style-type: none"> Identify and publicise good practices on designing and delivering DFE to seniors. 	Older adults	Medium term
Objective 2 Ensure that access and use of digital financial services are carried out on the basis of adequate information and knowledge	Actions to promote a higher take-up of DFS		
	<ul style="list-style-type: none"> Promote and encourage DFE initiatives that cover the use of the most basic DFS and/or digital tools (e.g. payment accounts with basic features, basic online banking, features offered by financial institutions to secure online payments, etc.). 	Older adults Low income – low education Other groups	Medium term
	<ul style="list-style-type: none"> Develop partnerships and synergies with existing entities or programmes involved in digital inclusion and/or the development of adults' digital skills (such as the Creative Communities for Digital Inclusion, the High Commission for Migration, etc.) in order to include digital financial skills in existing programmes as relevant. 	Stakeholders Older adults Low income – low education Women Other groups	Medium term
	<ul style="list-style-type: none"> Develop a partnership with the National Institute for Rehabilitation in order to enhance usability and accessibility of the Bank Customer Website of the Banco de Portugal and/or the <i>Todos Contam</i> website interface design. 	Stakeholders Older adults	Short term
	Actions to improve awareness of where and how to find reliable and impartial sources of information on the safe use of DFS		
	<ul style="list-style-type: none"> Support the development of DFE initiatives (such as dedicated digital and in-person training and workshops, events, awareness campaigns, etc.) on where to find impartial information on DFS (e.g. features of products, rights of consumers, redress mechanisms) and related risks. 	Whole population	Short term
	<ul style="list-style-type: none"> Support the development of DFE initiatives in schools (such as dedicated digital and in-person training and workshops, events, awareness campaigns, etc.) highlighting that information available on the Internet and social media (e.g. influencers) may be misleading and not reliable. 	Youth	Short term
	<ul style="list-style-type: none"> Support the population in accessing reliable and impartial sources of DFE on DFS through: <ul style="list-style-type: none"> The creation of an easily accessible and centralised database/register of identified reliable providers of digital financial education, trusted initiatives per topic/target audience, etc. 	Whole population	Short term
	<ul style="list-style-type: none"> Making this database easily accessible on a dedicated webpage or on a tab on the Banco de Portugal and/or Todos Contam 	Whole	Short term

Objectives	Actions	Target groups	Timeframe
	websites under a clear and catchy title such as “Where can I educate myself on digital finance?”.	population	
	<ul style="list-style-type: none"> Support the population in accessing reliable and impartial information on regulated DFS providers by creating a centralised and easily accessible database of those providers. 	Whole population	Short term
	Actions to improve the digital financial knowledge of the population		
	<ul style="list-style-type: none"> Encourage, support and organise DFE initiatives (such as dedicated digital and in-person training and workshops, events, awareness campaigns, etc.) raising awareness of the population on the following topics: 		
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> The main features of DFS, their providers and the related risks. It includes innovative products such as crypto-assets and other blockchain-based products, focusing in particular on the risks and regulatory aspects. It also includes raising awareness on the digital euro, in case it is adopted. 	Whole population Youth	Short term
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Consumer rights in an online environment and the regulatory aspects of DFS. DFE initiatives should cover aspects related to the awareness of relevant supervisory authorities, the application of financial consumer protection rules in online/offline environments, the right to transparent information, the right to cancel an online purchase, where and how to make a complaint, redress procedures, etc. 	Whole population Youth	Short term
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> The cross-border implications of DFS covering knowledge related to how and where to find the origin of a DFS provider, awareness about the implications of purchasing DFS authorised in other EU and non-EU jurisdictions, etc. 	Whole population Youth	Short term
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> The existence and the use of reliable and impartial digital tools, notably those which may be relevant for promoting saving behaviour and for individual financial resilience i.e. budgeting tools, comparative tools, etc. 	Whole population Youth	Short term
Objective 3	Actions to improve digital financial behaviours and attitudes		
Promote a safe use of digital financial services	<ul style="list-style-type: none"> Integrate the following topics in existing -or new where needed- DFE initiatives (such as online awareness campaigns, digital and in-person trainings and workshops): 		
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Basic safety procedures to be followed online (e.g. how to set strong passwords for different accounts and change them regularly, how to ensure one uses secure websites and mobile applications, etc.) while taking into account the different devices used to navigate online. 	Youth Older adults Low income – low education	Short term
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> The most common online financial frauds and scams (such as shoulder surfing, phishing and pharming). In this regard, the use of real-life examples of online financial scams and frauds (e.g. real stories of everyday scams and phishing attacks, examples of positive actions taken, etc.) should be encouraged. 	Youth Older adults	Short term
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> The importance of reading and understanding privacy policy statements before providing personal data, including on social media, and the use of personal data by financial services providers (profiling, credit scoring) as well as the related risks (exclusion, exposure to frauds and scams). 	Youth Older adults	Medium term
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Examples of discretionary actions to be taken to protect personal data (for example asking websites to delete one’s data, limiting 	Youth	Medium term

Objectives	Actions	Target groups	Timeframe
	access to personal data on social media, exploring data and privacy settings, etc.).	Older adults	
	<ul style="list-style-type: none"> The importance of reading and understanding information and disclosure documents when using DFS. When possible, the use of behavioural insights to educate individuals on how to read financial information should be encouraged. 	Whole population	Short term
	<ul style="list-style-type: none"> Develop a campaign to provide basic information and warnings in public places where people may engage in financial transactions online through public Wi-Fi. This can be done through the Portuguese Hotels Association, Airports of Portugal and the National Association of Portuguese Municipalities for instance. 	Whole population	Medium term
	<ul style="list-style-type: none"> Liaise and develop partnerships with the National Cybersecurity Centre and with the National Commission for the Protection of Data (CNPD). Such partnerships could result in the participation in events related to digital safety (e.g. the Cybersecurity Month) or to data protection (e.g. the Data Protection Day). 	Stakeholders Whole population	Short term
	Actions to encourage financial consumers to assert their rights		
	<ul style="list-style-type: none"> Promote and encourage online awareness campaigns as well as digital and in-person trainings and workshops that encourage the reporting of online financial frauds and scams, that provide information on how to do so, and that highlight why reporting frauds and scams matters, taking into account the reasons why individuals may not always report fraud (e.g. the feeling that it would not make a difference or a lack of awareness of where and how to do so). 	Youth Whole population	Short term
	<ul style="list-style-type: none"> Raise awareness of the public authorities and other relevant entities (such as the Police, the Cybercrime Office of the Prosecutor General's Office, the Portuguese Association for Consumer Protection, the Portuguese Association for Victim Support, etc.), using several channels, to which individuals can report digital frauds and scams, seek help, complain and obtain redress. 	Youth Whole population	Short term
	Actions to raise the population's awareness of behavioural biases when using financial products and services through digital channels		
	<ul style="list-style-type: none"> Promote and encourage online awareness campaigns as well as digital and in-person trainings and workshops that: <ul style="list-style-type: none"> Raise DFS users' awareness on the impacts of advertising and peer pressure when making personal financial decisions online. Raise DFS users' awareness and mitigate some of the behavioural biases amplified by digital tools (e.g. impulsive buying, ease of use that may lead to overspending, etc.) and social media (e.g. fear of missing out, herding behaviour, etc.). In this regard, DFE initiatives could consider 'debiasing' trainings and workshops using games, or videos and plays, where users can see real life examples of biases and feel a personal and emotional involvement. 	Whole population	Medium term
		Whole population	Medium term
Objective 4	Actions to encourage the evaluation of digital financial literacy initiatives through co-ordinated approaches		
Improve the effectiveness of digital financial	<ul style="list-style-type: none"> Develop monitoring and evaluation guidelines to promote the collection of standardised information and incentivise their adoption and usage. The guidelines should notably encourage providers of DFE to: <ul style="list-style-type: none"> Monitor and evaluate their DFE initiatives in a systematic way. 	Stakeholders	Medium term

Objectives	Actions	Target groups	Timeframe	
literacy initiatives through evidence, evaluation, and co-ordination	<ul style="list-style-type: none"> ○ Report findings to the Banco de Portugal on a yearly basis under a pre-defined agenda. 	Stakeholders	Medium term	
	<ul style="list-style-type: none"> ○ When initiatives are delivered online, encourage automatic monitoring through the use the analytical features of digital tools, while ensuring full respect of data privacy. 	Stakeholders	Medium term	
	<ul style="list-style-type: none"> ○ When possible, consider the use of external independent professional evaluators, including research institutions and academia. 	Stakeholders	Medium term	
	<ul style="list-style-type: none"> ○ When possible, pool resources to evaluate the relevance and efficiency of DFE initiatives. 	Stakeholders	Medium term	
	<ul style="list-style-type: none"> ○ Share knowledge and mutual learning. 	Stakeholders	Medium term	
	<ul style="list-style-type: none"> ● Facilitate the dissemination of evaluation findings and best practices though a dedicated chapter in the annual report mentioned in “Main responsibilities of the leading entity”. 	Stakeholders	Medium term	
	Actions to enhance collaboration to conduct research and continue to collect evidence on levels of digital financial literacy			
	<ul style="list-style-type: none"> ● Promote enhanced partnerships between public, private and research institutions to further understand digital financial attitudes and behaviours of the Portuguese population through in-depth data collection exercises and research on specific sub-groups of the population. 	Stakeholders	Medium term	
<ul style="list-style-type: none"> ● Collect digital financial literacy data at regular intervals for the purpose of monitoring the impact of the Strategy and as input to DFE initiatives. In this regard, participation in international surveys to measure digital financial literacy -such as those conducted by the OECD/INFE- will be encouraged. 	Stakeholders	Medium term		

Annex B. Performance indicators

This Annex presents a list of possible performance indicators linked to the Strategy's Objectives and the related actions. Such performance indicators may be used for monitoring and evaluation purposes.

Certain performance indicators may be relevant in the short term, while others should be considered from a medium-term perspective. It is also important to note that these indicators may be influenced by a variety of factors which go beyond digital financial education per se and may include developments in personal and social circumstances, macroeconomic developments in the national or the global economy, and a wide range of social, economic and financial policies. Therefore, they should be applied and interpreted appropriately when used for monitoring or evaluation purposes.

Table A 2. List of possible performance indicators

Performance indicators linked to the Strategy's Objectives that may be used for monitoring and evaluation purposes

Objectives	Actions	Possible performance indicators
Objective 1 Recognise the importance of digital financial literacy and ensure access to quality digital financial education for all	Actions to acknowledge the importance of digital financial literacy at national level, among policy makers and other stakeholders	<ul style="list-style-type: none"> • Number and reach of communication activities about DFL by public stakeholders in national organisations. • Number of organisations participating in events where DFL matters are discussed and number of people reached. • Number of initiatives involving public authorities pertaining to the implementation of the Strategy.
	Actions to make the population aware of the importance of digital financial literacy	<ul style="list-style-type: none"> • Number of communication campaigns delivered through various media channels, number of people reached and awareness/recall measures. • Number of organisations participating in events where current issues of relevance to digital financial consumers are discussed and number of people reached. • Number of (monthly) views of dedicated webpages on DFL. • Number of (monthly) views in the dedicated DFL Youtube channel of <i>Todos Contam</i> or of the Banco de Portugal. • Number of followers/mentions in hashtags on the new <i>Todos Contam's</i> or the Banco de Portugal's Instagram and/or Twitter account.

Objectives	Actions	Possible performance indicators
	Actions to increase the reach of digital financial education initiatives	<ul style="list-style-type: none"> • Number of new co-operation agreements between stakeholders (e.g. number of protocols/Memorandum of Understanding signed, etc.). • Total number of individuals reached through DFE initiatives. • Number of monthly users of the dedicated part on DFL of the <i>Todos Contam</i> and/or the Banco de Portugal's Consumer website(s). • Number of stakeholders in Portugal active in the provision of DFE and/or the implementation of the Strategy. • Number of applications on topics related to DFL in the <i>Todos Contam</i> competition. • Number of and reach of DFE initiatives targeting students. • Number and reach of DFE initiatives targeting parents or guardians.
	Actions to use delivery channels tailored to the needs of the relevant target groups, while combating digital (financial) exclusion	<ul style="list-style-type: none"> • Number, reach and impact of DFE initiatives using digital delivery channels. • Number of DFE initiatives that are designed and delivered taking account behavioural biases • Number, reach and impact of DFE initiatives using social media. • Number, reach and impact of DFE initiatives using traditional media (press, TV, radio). • Number of potential touchpoints reached, and number of training sessions delivered to them. • Number of potential intermediaries and number of partnerships established. • Reduction in the percentage of digitally excluded individuals. This may be monitored through improvements in relevant Digital Economy and Society Index (DESI) indicators (Internet usage) or indicators in other relevant digital inclusion surveys.
Objective 2 Ensure that access and use of digital financial services are carried out on the basis of adequate information and knowledge	Actions to promote a higher take-up of DFS	<ul style="list-style-type: none"> • Improvements in percentage of users of DFS (number of people shopping online, using home banking and/or other DFS) though improvements in relevant Digital Economy and Society Index (DESI) indicators (online banking usage, e-commerce, etc.) or indicators in other relevant digital financial inclusion surveys. • Number, reach and impact of DFE initiatives mainly dedicated to a senior audience. • Number, reach and impact of in-person DFE initiatives covering the use of basic DFS. • Number of partnerships established with digital inclusion entities and programmes.
	Actions to improve awareness and knowledge of where and how to find reliable and impartial sources of information on the safe use of DFS	<ul style="list-style-type: none"> • Number, reach and impact of DFE initiatives on where to find reliable information on DFS. • Number, reach and impact of DFE initiatives on risks related to information found on the Internet and social media. • Number of (monthly) views of a database on reliable and impartial sources of DFE. • Number of DFE initiatives and providers in the database.
	Actions to improve the digital financial knowledge of the population	<ul style="list-style-type: none"> • Improvements in DFL scores measured with the OECD/INFE Toolkit and other surveys and in particular: <ul style="list-style-type: none"> ○ Improvements in digital financial knowledge scores. ○ Percentage of individuals answering correctly questions on personal data, consumer rights, crypto-assets, etc. included in the Questionnaire of the digital financial literacy survey, see Annex E of OECD (2023_[11]) • Number, reach and impact of DFE initiatives covering (some of) the suggested topics. • Number of stakeholders that use the revised core competency framework(s) in the design, implementation and evaluation of their initiatives.

Objectives	Actions	Possible performance indicators
Objective 3 Promote a safe use of digital financial services	Actions to improve digital financial behaviours and attitudes	<ul style="list-style-type: none"> • Number, reach and impact of DFE initiatives covering online safety measures. • Improvements in online safety score measured with the OECD/INFE Toolkit and other surveys. • Improvement in digital financial behaviour and attitudes score measured with the OECD/INFE Toolkit (OECD, 2022^[20]) and other surveys. • Improvements in relevant Digital Economy and Society Index (DESI) basic safety skills indicators. • Percentage of victims of online frauds and scams. • Number of people reached by awareness campaigns and warnings on common online frauds and scams. • Number of campaigns developed with stakeholders to provide basic information and warnings in public places on the risks of using public Wi-Fi. • Number and reach of actions undertaken in co-operation with the National Cybersecurity Centre or other relevant stakeholder(s) active in this domain. • Number, reach and impact of DFE initiatives covering data protection issues.
	Actions to encourage financial consumers to assert their rights	<ul style="list-style-type: none"> • Number, reach and impact of DFE initiatives encouraging the reporting of online financial frauds and scams. • Number, reach and impact of DFE initiatives encouraging safe behaviours when using DFS. • Number and types of complaints received by financial institutions or Portuguese supervisory authorities.
	Actions to raise the population's awareness of behavioural biases when using financial products and services through digital channels	<ul style="list-style-type: none"> • Number, reach and impact of DFE initiatives raising awareness on how behavioural biases are exacerbated in the digital environment.
Objective 4 Improve the effectiveness of digital financial literacy initiatives through evidence, evaluation, and co-ordination	Actions to encourage the evaluation of digital financial literacy initiatives through co-ordinated approaches	<ul style="list-style-type: none"> • Number and/or percentage of stakeholders adopting and using the guidelines. • Number and/or percentage of DFE providers who evaluate their initiatives on a yearly basis and use the results to adjust or enhance their initiatives. • Number and/or percentage of DFE providers who automatically monitor their initiatives delivered digitally. • Number and/or percentage of providers of DFE who use external independent professional evaluators, such as research institutions and academia, to evaluate their initiatives and use the results to adjust or enhance their initiatives.
	Actions to enhance collaboration to conduct research and continue to collect evidence on levels of digital financial literacy	<ul style="list-style-type: none"> • Number of new partnerships established to conduct research on digital financial attitudes and behaviours. • Collection and analysis of digital financial literacy data, for example through a possible repetition of the OECD survey conducted in 2022 (OECD, 2023^[11]). • Number of yearly research/publications on digital financial education/literacy in Portugal.

References

- Banco de Portugal (2021), *Strategic Plan 2021-25*, [12]
https://www.bportugal.pt/sites/default/files/anexos/documentos-relacionados/strategic_plan_of_banco_de_portugal_2021-2025.pdf.
- CNSF (2022), *National Plan for Financial Education 2021-2025*, [11]
https://www.todoscontam.pt/sites/default/files/2022-05/national_plan_for_financial_education_2021-2025.pdf.
- European Union (2020), *A Capital Markets Union for people and businesses-new action plan*, [14]
https://eur-lex.europa.eu/resource.html?uri=cellar:61042990-fe46-11ea-b44f-01aa75ed71a1.0001.02/DOC_1&format=PDF.
- European Union (2020), *Digital Finance Strategy for the EU*, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0591&from=EN>. [15]
- European Union/OECD (2022), *Financial competence framework for adults in the European Union*, <https://www.oecd.org/daf/fin/financial-education/financial-competence-framework-for-adults-in-the-European-Union.pdf>. [17]
- Morgan and al. (2019), *The Future of Work and Education for the Digital Age: The Need to Promote Digital Financial Literacy for the Digital Age*, <https://t20japan.org/policy-brief-need-promote-digital-financial-literacy/>. [18]
- OECD (2023), *Digital financial literacy in Portugal: Relevance, evidence and provision*, [1]
<https://www.oecd.org/finance/financial-education/digital-financial-literacy-in-portugal-relevance-evidence-and-provision.htm>.
- OECD (2022), *Evaluation of National Strategies for Financial Literacy*, [19]
<https://www.oecd.org/finance/education/evaluation-of-national-strategies-for-financial-literacy.htm>.
- OECD (2022), *OECD/INFE Guidance on Digital Delivery of Financial Education*, [6]
<https://www.oecd.org/finance/education/INFE-guidance-on-digital-delivery-of-financial-education.pdf>.
- OECD (2022), *OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022*, [20]
<https://www.oecd.org/finance/education/2022-INFE-Toolkit-Measuring-Finlit-Financial-Inclusion.pdf>.
- OECD (2021), *G20/OECD Report on Lessons Learnt and Effective Approaches to Protect Consumers and Support Financial Inclusion in the Context of COVID-19*, [4]

- <https://www.oecd.org/daf/fin/financial-education/G20-OECD-report-on-financial-consumer-protection-and-financial-inclusion-in-the-context-of-covid-19.pdf>.
- OECD (2021), *G20/OECD-INFE Report on supporting financial resilience and transformation through digital financial literacy*, [2]
https://www.gpfi.org/sites/gpfi/files/documents/5_OECD%20INFE%20Report_Supporting%20resilience%20through%20digital%20financial%20literacy.pdf.
- OECD (2020), *OECD-INFE 2020 International Survey of Adult Financial Literacy*, [10]
<http://www.oecd.org/financial/education/launchoftheoecdinfeglobalfinancialliteracysurveyreport.htm>.
- OECD (2020), *Recommendation of the Council on Financial Literacy*, OECD/LEGAL/0461, [9]
<https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0461>.
- OECD (2018), *G20/OECD Policy Guidance on Financial Consumer Protection Approaches in the Digital Age*, <https://www.oecd.org/finance/G20-OECD-Policy-Guidance-Financial-Consumer-Protection-Digital-Age-2018.pdf>. [5]
- OECD (2017), *G20/OECD INFE Report on ensuring financial education and consumer protection for all in the digital age*, <https://www.oecd.org/daf/fin/financial-education/G20-OECD-INFE-Report-Financial-Education-Consumer-Protection-Digital-Age.pdf>. [7]
- OECD (2012), *High-level Principles on National Strategies for Financial Education*, [8]
<https://www.oecd.org/daf/fin/financial-education/OECD-INFE-Principles-National-Strategies-Financial-Education.pdf>.
- Portugal Digital (2020), *Portugal's Action Plan for Digital Transition*, [13]
https://portugaldigital.gov.pt/wp-content/uploads/2022/01/Portugal_Action_Plan_for_Digital_Transition.pdf.
- United Nations (2015), *Transforming our world: the 2030 Agenda for Sustainable*, [16]
<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/291/89/PDF/N1529189.pdf?OpenElement>.
- World Bank (2022), *The Global Findex Database 2021*, [3]
<https://www.worldbank.org/en/publication/globalindex/Report>.

