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Thematic Report on national financial education initiatives on digitalization, with a focus on cybersecurity, scams and fraud

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Abbreviations

EBA	European Banking Authority
EIOPA	European Insurance and Occupational Pensions Authority
ESA	European Supervisory Authority
ESMA	European Securities and Markets Authority
EU	European Union
IOSCO	International Organization of Securities Commissions
NCA	National competent authority
OECD	Organization for Economic Co-operation and Development
OECD-INFE	OECD's International Network on Financial Education

Executive summary

The European Supervisory Authorities (ESAs) are mandated under their respective Founding Regulations to review and coordinate financial literacy and education initiatives by national competent authorities. As a follow-up to previous work done in this area¹, the ESAs have assessed the risks currently arising to EU consumers in the context of the COVID-19 pandemic and the increased use of digital financial services, and identified financial vulnerability and exclusion as two important risks. The ESAs found the lack of financial literacy and unfamiliarity with digital technologies to be key drivers of these risks, because access to digital channels and digital infrastructure has become a prerequisite for consumers to make use of such services and because a lack of digital financial skills makes consumers more prone to be targets of digital scams and fraud.

To address this issue, the ESAs have decided to support national competent authorities (NCAs) on this topic, by issuing a thematic report on the implementation across the EU of national financial education initiatives on digitalization, with a focus on cybersecurity, scams and fraud. The report provides meaningful insights for NCAs and other public entities on good practices when designing and implementing financial education initiatives, thereby sharing experiences of other NCAs in the EU, without prescribing a specific approach.

This report is based on an analysis of the Joint ESA's thematic repository of 127 national financial education initiatives on digitalization with a focus on cybersecurity, scams and fraud, that was published on 31 January 2022.² It presents an overview of the subject matters, objectives, format, type of output, promotional channels, target group and organizational aspects of the financial education initiatives reported in the thematic repository. It also draws on insights from a joint ESAs high-level conference on financial education and literacy that was held on 1-2 February 2022 and a workshop with NCAs in September 2022.

The ESAs identified 12 good practices that can help NCAs, in particular how to address specific target groups, increase the reach and effectiveness of such initiatives, and improve the planning of the initiatives more generally. More specifically, the good practices include the publication of a blacklist of fraudulent providers and the targeting of young, technologically literate consumers in relation to the financial risks arising from novel financial products and services linked to new technologies such as crypto assets. Technology-averse parts of the population, in turn, can be more easily reached through non-digital channels and can be taught to use tools to use services safely with reduced risk of fraud. A further good practice is to achieve good searchability of websites of the NCAs so that they come up as one of the first search results in a search engine.

¹ See Annex 1 on the role of the ESAs in financial education.

² [Link](#) to the Joint ESAs thematic repository of national financial education initiatives on digitalisation - with a specific focus on cybersecurity, scams and fraud.

1 Background

1. The European Supervisory Authorities (ESAs) are mandated under Article 9 of their respective Founding Regulations to “take a leading role in promoting transparency, simplicity and fairness in the market for consumer financial products or services across the internal market, including [...] by reviewing and coordinating financial literacy and education initiatives by the competent authorities”. To fulfil this mandate, the ESAs have individually and collaboratively engaged in various activities to support national competent authorities (NCA) or consumers directly to strengthen consumers’ financial literacy.³
2. In the context of the COVID-19 pandemic and the increasing use by consumers of digital offers to manage their finances, the ESAs observed that there is a need to increase the digital financial literacy of consumers, especially with regards to cybersecurity, scams and fraud.⁴ Otherwise, in a context of increasing digitalization, financial illiteracy and unfamiliarity with digital technologies could lead to widespread financial vulnerability and greater financial exclusion. This is because access to digital channels and digital infrastructure and the skills to employ them is a prerequisite for consumers to make use of financial services offered via digital distribution channels. Moreover, those digital offerings of financial services may become the norm going forward. This trend is reinforced by the trend of declining numbers of branches of financial entities such as banks, which have played a vital role in providing services to people without digital skills. Especially amongst the growing population of the elderly in some Member States, a lack of competency to safely use digital channels for handling financial matters has been observed. Furthermore, a lack of digital financial skills makes consumers more prone to be targets of scams and fraud. Consequently, it is of paramount importance for Member States to not only foster the financial, but also the digital financial literacy among their population, to prevent financial exclusion and mitigate financial vulnerability.
3. Against this background, the question arose on how the ESAs could support the NCAs’ efforts on digital financial education. The ESAs have concluded that there is merit in gathering experiences from NCAs on the implementation of their financial education initiatives on digitalization. Therefore, the ESAs have decided to draft this report on the aforementioned experiences, identify lessons learned, as well as good practices, and divulgate them amongst NCAs. This report provides meaningful insights for NCAs and other public entities on good practices when designing and implementing financial education initiatives, thereby helping them to learn from experiences of other NCAs in the EU, without prescribing a specific approach.

³ The role of the ESAs on financial education is explained in detail in Annex I.

⁴ The OECD/INFE defines digital financial literacy as “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.” See [link](#) to OECD/INFE Guidance on Digital Delivery of Financial Education

- Chapter 2 provides an overview of financial education initiatives and the educational approaches used by national authorities. The overview is based on a structured analysis and discussion of the Joint ESA's thematic repository on national financial education initiatives on digitalization with a focus on cybersecurity, scams and fraud, published on 31 January 2022.⁵ Chapter 3 puts in focus selected financial education initiatives that were presented by NCAs at an ESA workshop with NCAs in September 2022. Chapter 4 draws lessons learned and identifies good practices on the implementation of financial education initiatives, which are based on the insights from the above-mentioned repository and ESA workshop, as well as on the insights of the joint ESAs high-level conference on financial education and literacy held on 1-2 February 2022.⁶ Chapter 5 draws conclusions for the work of the ESAs and NCAs on financial education.

2 Overview of financial education initiatives and the educational approaches used by national authorities

- This chapter provides a structured, aggregated overview of the initiatives that feature in the thematic repository on digitalization. The thematic repository consists of 127 financial education initiatives that have been carried out or that were still ongoing by the end of 2021. It covers initiatives from NCAs from 24 EU Member States, while 3 Member States did not participate in the establishment of the repository. The specific focus of the thematic repository is on cybersecurity, scams and fraud. The repository contains the following information for each initiative, which is listed below and described in more detail in the remainder of the chapter:
 - Target group,
 - subject matter and objective,
 - format, type of output and promotional channel,
 - start and end date of the initiative,
 - main organizer and co-organizer.
- The analysis of the repository reveals that the key issues and trends of financial education initiatives on digitalization seem to have centered around financial innovation as well as on cybersecurity, scams and fraud. Regarding financial innovation, in recent years, NCAs have dedicated most of their attention to informing consumers about crypto-assets and their associated risks, followed by educating consumers about new forms of investment and payment tools. At the same time least attention was devoted to education about crowdfunding. With

⁵ [Link](#) to the Joint ESAs thematic repository of national financial education initiatives on digitalisation - with a specific focus on cybersecurity, scams and fraud.

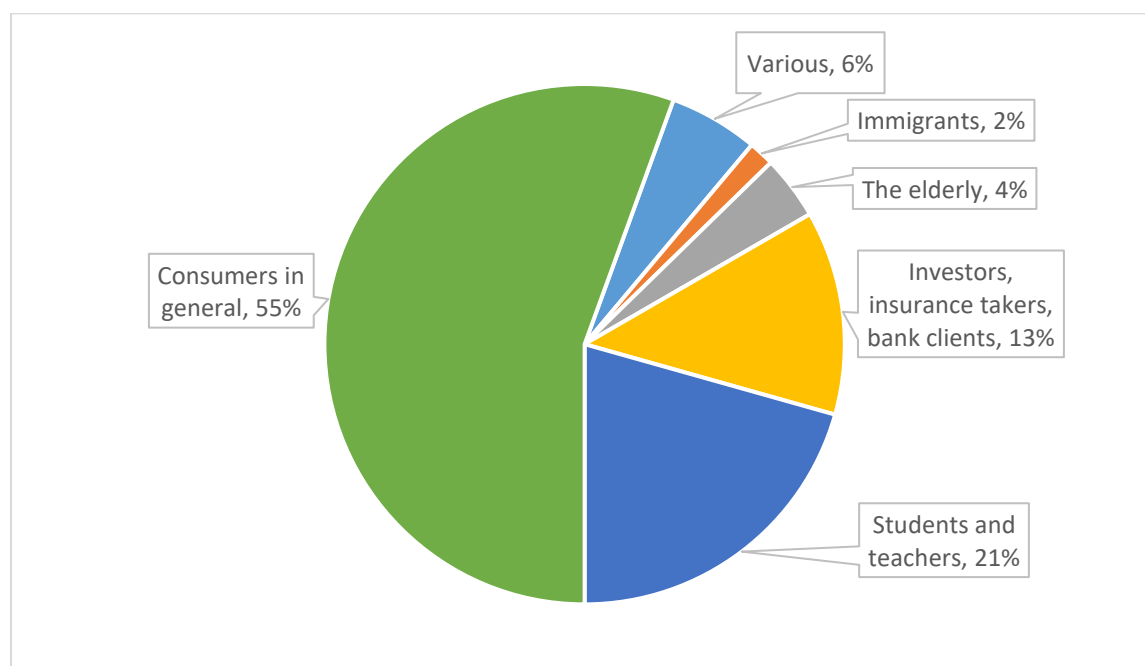
⁶ [Link](#) to the joint ESAs' high-level conference on financial education and literacy 2022.

regards to cybersecurity, scams and fraud, NCAs have recently launched more initiatives on warnings and education about scams; however, the safe use of digital tools and preventing fraud has also been part of financial education initiatives.

2.1 Target group

- Figure 1 visualizes the main target group of the 127 initiatives. 56% of the initiatives did not have a specific target group and have instead been addressed to consumers in general. The largest group that has been the main target of 21% of initiatives was consisting of secondary and tertiary level students and their teachers. After that, 13% of initiatives targeted retail investors, insurance takers and bank clients, who should not be confused with the general public. The elderly have been the main target of only 4% of initiatives, 2% of initiatives targeted immigrants or their teachers and the remaining 6% of initiatives targeted various very specific groups, such as judges, journalists and sports professionals.

Figure 1: Main target group, by percentage



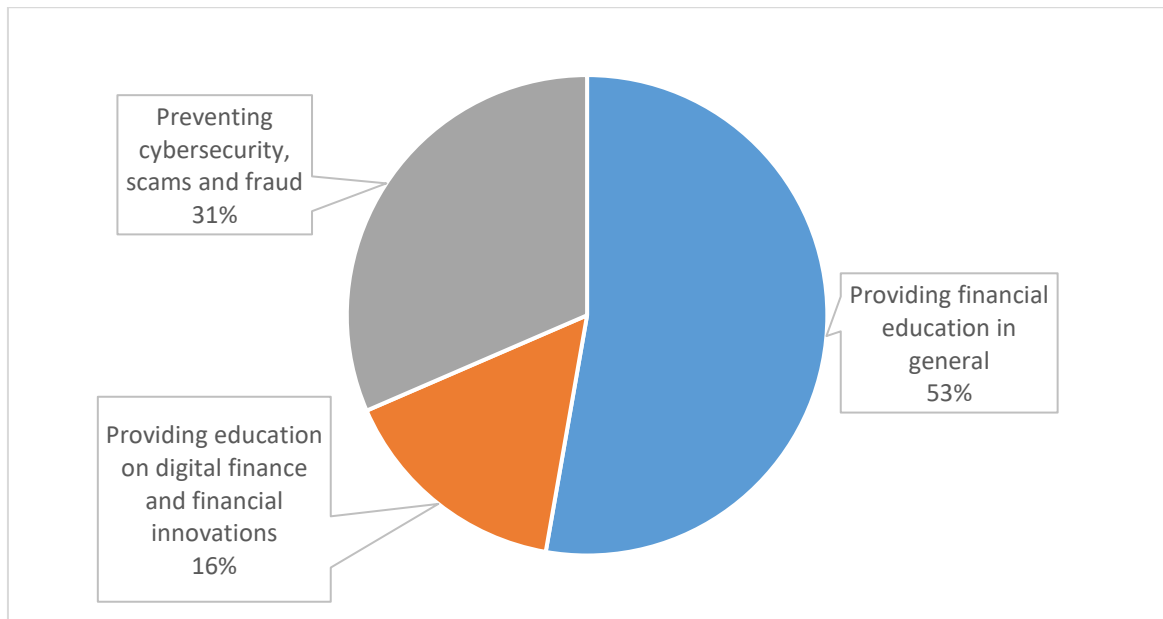
2.2 Subject matter & objective

- The 127 initiatives presented in the thematic repository have objectives and subject matters that can usefully be differentiated into three types as illustrated in Figure 2:
 - 53% of the initiatives aim at increasing the overall financial education of the target group. These initiatives may include sections dedicated to scams and unsound investments in general, while there is overall only limited content on cybersecurity.
 - 16% aim at informing the target group about digital finance and especially about financial innovation such as crypto-assets, digital payment means and their associated risks, including

(cyber-)scams and fraud. Often these initiatives provide advice on how to safely use digital means.

- 31% of initiatives are targeted at increasing knowledge about cybersecurity, scams and fraud, often providing very concrete warnings about specific kinds of scams and fraud or what kind of digital hygiene to adopt to increase cybersecurity. The majority of these initiatives focus on scams.

Figure 2: Main subject matter and objective of FE initiatives, by percentage



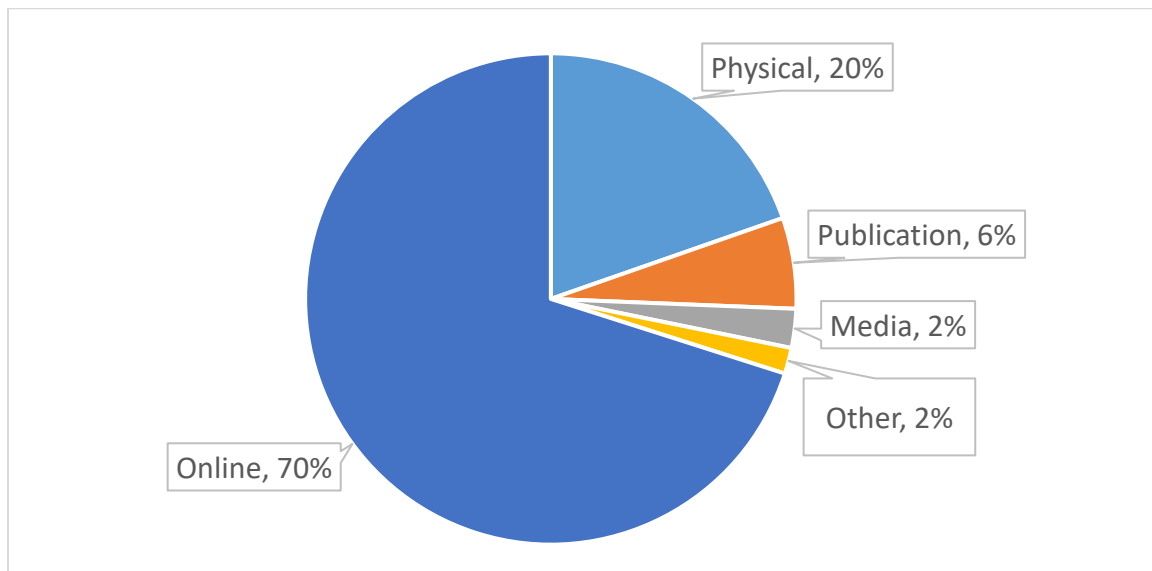
2.3 Format, type of output and promotional channel

9. The format of the initiatives in the repository describes the main channel through which the initiative is supposed to reach its target audience, while other channels may also be used to support the initiative. An analysis of the initiatives in the repository shows that NCAs have used a wide range of formats: from more innovative online tools to traditional face-to-face seminars, which can, however, be summarized into the following main formats: online, physical, publication, media and other. As depicted in Figure 3, the analysis reveals that:

- At 70%, the vast majority of initiatives has been launched in an online format. Within that group, the most prominent format has been the designing of websites, followed by developing of webinars, running social media campaigns, and using digital tools such as a cost-comparison tool or a scam identifier. The latter can be in the form of a website or a mobile application.
- 20% of initiatives have been launched in a physical format, often allowing for a limited but direct interaction with the target group, taking the form of seminars, workshops, conferences or similar. In many cases, a physical seminar or conference has also been streamed online.

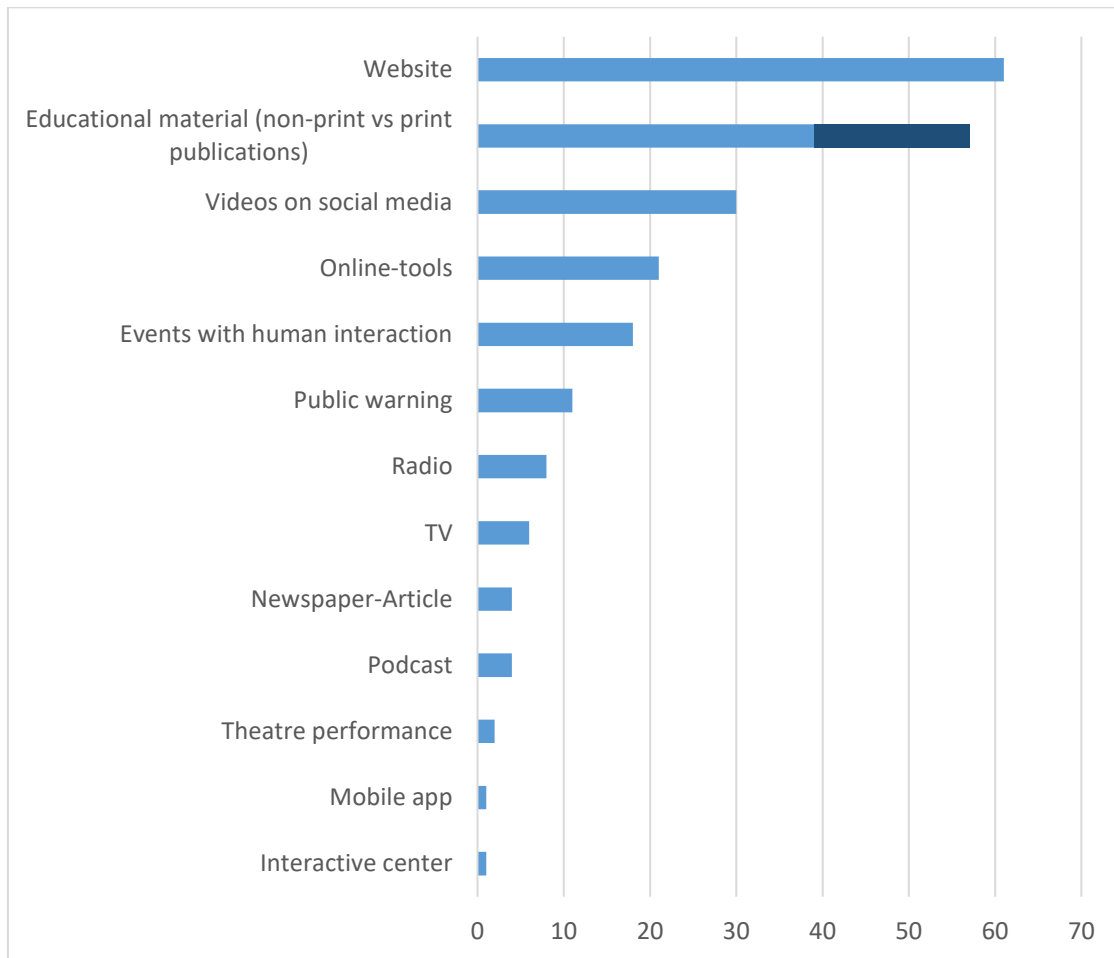
- 6% of initiatives have been designed as publications, such as leaflets, booklets, educational material, etc.
- Only about 2% of initiatives have been launched as a media campaign, aired on TV and radio. These campaigns often included direct warnings.
- Other types of formats (2%) have included a phone call campaign or plays at the theatre.

Figure 3: Main format of the initiatives, by percentage



10. Notwithstanding the main format by which the initiatives are identified, there is a multitude of outputs that these initiatives have produced, with many having resulted in several different outputs in parallel. The majority of initiatives have resulted in a website (61) and educational material (57). Some of those initiatives producing educational material have included a print publication (18). Some initiatives have also resulted in videos (30) which have been shared on social media, while other initiatives have produced online-tools such as comparators, simulators, or games (21). In the context of some initiatives, NCAs have organized an event with physical or online human interaction such as a workshop, a seminar, or a conference (18). Despite that a third of the initiatives focus on cybersecurity, scams and fraud (see Figure 2), only a small number of initiatives seems to have resulted in an explicit public warning (11). Traditional media products such as newspaper articles, TV interviews or radio pieces have been the result of only a small number of initiatives (less than 10 each). The least produced outputs have been podcasts (4), theatre performances (2), a mobile app (1) and an interactive center in a permanent exposition space (1). The results are visualized in Figure 4 below.

Figure 4: Type of output produced, ranked by number of mentions

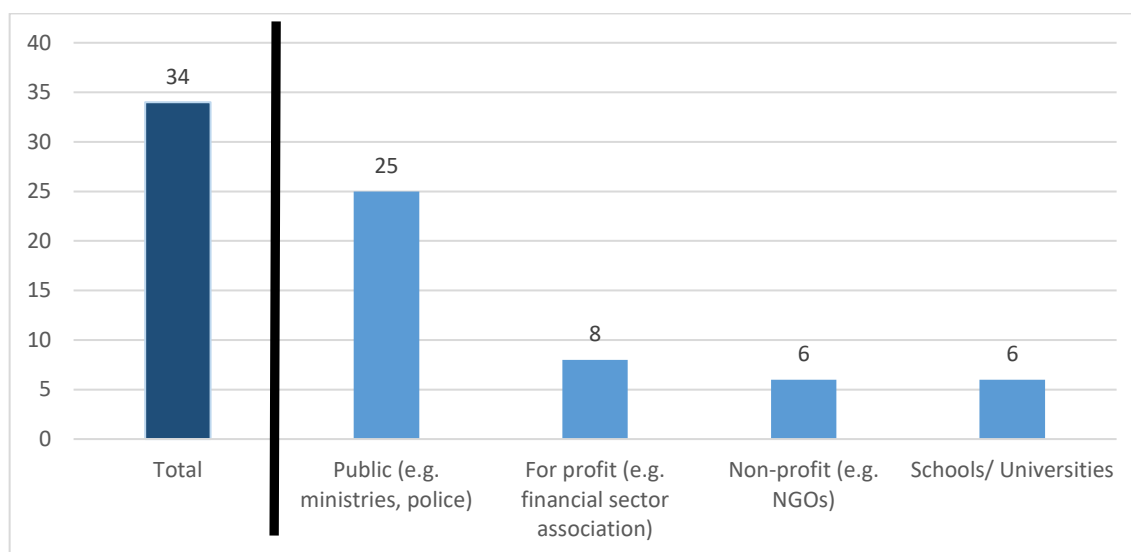


11. Regarding the frequency at which the outputs have been produced, 71% of the initiatives are either ongoing (e.g., websites) or recurring (e.g., seminars, podcasts), while 29% have been of a limited duration: either being one-off events, such as a conference, or running for a limited time, such as an advertisement campaign.
12. Finally, in respect of the promotional channels that have been used by the initiatives, these have been to a large degree a consequence of the output that the initiatives have produced. For example, TV-reports have been aired on TV while video clips designed for social media have been promoted via social media. However, for a website there can be various promotional channels, such as social media, as well as traditional media. The reported figures reveal that, for many initiatives, the NCAs have applied a multi-channel strategy, e.g., by trying to promote the output via traditional as well as social media channels.
13. It appears that, in general, the majority of initiatives have been promoted via websites or social media while traditional media have been used less frequently. Some specialized promotional channels have also been used. For instance, an initiative targeting bank customers has been promoted directly via the website of various banks. The networks of the co-organizers have been another targeted promotional channel.

2.4 Organization

14. Out of the 127 initiatives reported by NCAs, the majority have been organized only by the NCA or, in cooperation with other NCAs, for example between the national authorities responsible for banking supervision, capital markets supervision, insurance supervision or the central bank. The specific organization would depend on whether the national supervisory regime is integrated within a single institution or divided amongst several authorities.
15. Only 34 initiatives have been co-organized with other entities, some of which with multiple other organizations from various sectors. Out of these 34 initiatives, 25 have been organized with public entities other than NCAs, such as various ministries, national competition and consumer protection agencies, the police, the cybersecurity agency, the European Commission, or the OECD. Another 8 initiatives have been co-organized with private for-profit entities such as financial sector associations or with an influencer, while 6 have been organized with private non-profit organizations such as foundations or the association of senior citizens. In addition, 6 initiatives have been co-organized with schools or universities. Figure 5 illustrates these findings.

Figure 5: Number of cooperations with entities other than NCAs, total and by type of entity



Note: Total out of 127 initiatives, multiple mentions possible for subcategories.

3 Selected initiatives in focus

16. This chapter puts selected initiatives in focus that have been presented by NCAs at an ESA workshop with NCAs in September 2022 on the implementation of education initiatives targeted at increasing digital financial literacy. The insights from these initiatives, as well as from all the other initiatives presented in the thematic repository, are reflected in the lessons learned in Chapter 4.

17. One study that has been presented by one NCA has measured the exposure of the national population to investment scams. It discovered that out of a representative sample of 5000 adult respondents to a survey, 61% have been exposed to scams and at least 1% have probably become victims of scams. Extrapolating these results to the entire population means that hundreds of thousands of people may have been victims of scams in that Member State alone. The study has found that one reason for such exposure is that in some parts of the population there is a strong belief in the existence of alternative investments that outperform traditional ones. The main source of exposure has been advertisements online, in apps or on social media. In one third of the cases where people have received a fraudulent offer, it has been about an investment in crypto-assets with promises of high returns. Frequently, these offers have been made via social media, private messaging and dating websites/apps, thus reaching young people especially.
18. Based on these insights, that NCA has developed an initiative targeting young people via social media to warn them of such investment scams with crypto-assets. The purpose has been to raise awareness and to anchor reflexes of critically checking an offer before accepting it. To that end, the NCA has developed very short video clips (~15 seconds) to circulate on TikTok and Instagram. The videos start with teasers on how to become rich quick to attract attention, similar to how scammers would do it, but then reveal that such promises are a scam. The videos were released via various social media platforms and initially had a limited reach. Once the NCA sponsored the videos on social media, their reach increased significantly. The videos had the greatest reach with more than 2 million views on TikTok, which only required a small investment in comparison to the investments made on other social media platforms.
19. Another initiative of the same NCA was to develop a mobile app to help consumers identify scams. The app has included a blacklist of fraudulent providers as well as a list of authorized financial institutions. It has also included a link to a phone and web helpline of the NCA for customers and a questionnaire that should help to identify whether an offer is likely to be a scam or not. The app has been promoted mostly on social media, via posts as well as paid advertisements. However, the mobile app eventually had to be discontinued due to the elevated costs of IT maintenance and also due to the costs of the necessary recurring promotional campaigns to encourage the downloading of the mobile app. Instead, the NCA continues to provide a web app, i.e., a website with all the aforementioned functionalities.
20. A second NCA has presented amongst others an initiative targeted at young people. Despite often being technologically literate, young people too need to learn about cybersecurity and financial risks online. The aim of the initiative, which is still ongoing, is to promote the safe use of digital channels and strengthen digital financial literacy amongst young people. Via a multichannel approach and very simple messaging, the NCA aims at informing young people about various aspects of cybersecurity. The messages warn consumers not to reveal sensible information on social media, inform consumers about the most frequent scam and fraud methods, warn about the risks of using public Wi-Fi and free apps on the mobile phone, provide advice how to avoid

being tricked while shopping online and recommend how to react when falling victim of a scam or fraud. While this campaign runs on the NCA's website and social media, printed brochures were distributed among all schools and training sessions are regularly carried out in schools.

21. A third NCA has presented an initiative in which they have designed a simple online investment game. The game, which is still available, simulates a seven round investment sequence where investors can choose between a high-risk high-yield and a low-risk low-yield investment. Additionally, the game includes quizzes about common misconceptions of risk when investing. The game aims at revealing and dispelling common investment biases and provide an experimental learning experience. The approach is based on behavioral economics and has demonstrated that a playful, interactive learning experience generates more engagement by the target group and manages to better convey abstract concepts.

4 Lessons learned from financial education initiatives

22. This chapter presents the ESAs' assessment on lessons learned and good practices on designing and implementing financial education initiatives and strengthening digital financial skills among the population. It is based on the overview of the initiatives presented in the thematic repository, as well as on the insights from an internal workshop with NCAs and on the insights of the Joint ESAs' high-level conference on financial education.
23. The lessons learned are not intended to be exhaustive or representative, given that the focus of the repository is on initiatives on digitalization and especially on cybersecurity, scams and fraud. The identified good practices also do not promote or favor any particular approach to financial education; instead, they offer a useful overview of aspects to consider when implementing a financial education initiative. A detailed description of lessons learned from the implementation of financial education initiatives in general carried out in the banking sector features in the European Banking Authority's (EBA) financial education report 2019/2020.⁷

4.1 Mitigating consumer detriment, scams and fraud

24. With the increase in fraudulent offers for managing finances, the ESAs observe a growing demand for scam identification and for warnings coming from an impartial and trusted source. Consumers – even with advanced financial literacy skills – look for reassurance on the legitimacy and credibility of offers and may rather not invest than invest their money in a product or service which may be fraudulent. Although this behavior avoids the bigger risk of investing in a fraudulent offer, it is nevertheless to the consumers' detriment when it leads to a situation where consumers do not take any decision on the use of their savings and thus incur opportunity costs.

⁷ [Link](#) to the EBA Report on Financial Education 2019/2020

25. Consequently, the ESAs view it as good practice for NCAs to provide such warnings in an accessible and timely manner. This can be done, for instance, via the publication of a blacklist of fraudulent providers such as those coordinated by ESMA and IOSCO⁸, concrete examples of frequent scams, or helplines for consumers to consult on the legitimacy of an offer.
26. With regards to the demand from customers to confirm the legitimacy of an offer made by a financial entity, many NCAs encourage consumers to check whether that financial entity features on the public lists of authorized financial entities. Evidently, the authorization of these financial entities follows a rigorous procedure by the NCAs and thereby reduces the risks of these entities making fraudulent offers or scamming their customers. Nevertheless, the authorization of an entity does not exclude the risk of that entity engaging in misconduct and offering products and services that can be to the consumers' detriment. In fact, to consumers, it may not be clear that the list does not indicate or suggest endorsement by the NCAs of the products or services offered by financial entities on the list.
27. Therefore, the ESAs are of the view that when publishing a list of authorized entities, it is good practice to avoid giving the impression that the offers of financial entities on the list are endorsed by the NCA.

4.2 Addressing specific target groups

28. With regard to the concrete needs of consumers as regards digital financial literacy, the ESAs have identified that overconfidence of people with digital knowledge, but without financial training, can lead to a situation where those persons take actions that expose them to financial risks without being aware of them. This has been observed, for example, in relation to young people investing in crypto-assets, where they may not have understood the financial risks involved or the lack of recourse or protection available to them as crypto-assets typically fall outside existing protection under EU financial services rules.
29. Consequently, the ESAs consider it good practice to inform young, technologically literate consumers of the financial risks related to novel financial products and services linked to new technologies.
30. Regarding digitally illiterate parts of the population, the ESAs understand from the NCAs' experiences that some of the elderly may have a more established understanding of personal finance, but may lack the necessary digital skills to use technology to identify and apply the most appropriate financial decisions. For instance, despite fees rising for traditional banking products and services, older people have an increased tendency to use paper-based transfer orders, although online-banking would, in many cases, be cheaper and - when properly operated – safer to use. There is also a need to integrate other vulnerable groups into digital finance in general.

⁸ [Link](#) to IOSCO's investor alerts portal.

However, as shown in Figure 1, there are only about 6% of initiatives that are tailored to the elderly or vulnerable groups. The ESAs understand that general financial education initiatives may also be addressed to the elderly and vulnerable groups, but given the size of the groups – especially the elderly– there could be more need for specialized initiatives.

31. Consequently, the ESAs view it as good practice to foster the inclusion of tech-averse parts of the population by strengthening their digital skills. Evidently, trying to reach these target groups via online channels seems to be less effective than to reach them offline. Hence, it is good practice to reach them also through non-digital channels and provide them with tools to operate safely with reduced risk of fraud.
32. The ESAs observe that NCAs perceive a special need to train teachers as these can serve as multipliers for financial education. However, even in Member States where financial education is part of the mandatory school curriculum and also in cases where training initiatives for teachers are supported by the ministry of education, the challenge is to persuade teachers to act as such multipliers and to be proficient enough to perform that task. Furthermore, crowded curricula reduce the incentives for teachers to take on more tasks or update their knowledge. One reason is that teachers not only require specialized training but also specialized teaching material, which they would have to create themselves if not yet available.
33. In consequence, the ESAs view it as good practice to work closely with teachers to understand their specific educational needs as well as develop adequate educational material for the teachers to use. Furthermore, it is good practice to test the training of the teachers as well as the educational material. These measures facilitate convincing them to teach useful financial education content in schools.

4.3 Increasing the reach of financial education initiatives

34. The ESAs observe that it is often difficult to capture the interest of the target group through traditional campaigns. Instead, some target audiences have more interest in fun and entertaining activities. Their potential demand for edutainment and gamification does not seem to be satisfied. Various NCAs have shared their experiences in this regard, for instance that gamified content seems to generate an elevated level of engagement by the participants and hence a steeper learning curve. In addition, very short videos (2-3 minutes) can develop a further reach than long and detailed videos. Physical formats like theatre plays can also help reach a wider audience.
35. Therefore, the ESAs are of the view that it is good practice to package initiatives appropriately and in this context encourage NCAs to include fun and entertaining elements in their education campaigns. Especially gamification can help consumers not only acquire relevant knowledge but also some practical experience in handling financial matters and thus create a deeper learning experience.

36. The ESAs observe that there is a need for consumers to obtain reliable information since, besides the NCAs, there is a plethora of other actors purporting to provide financial education, such as NGOs, social media influencers or financial entities. However, some of these actors have vested interests and may provide misleading information.
37. Hence, the ESAs view it as good practice that the NCAs mandated to foster financial literacy establish themselves as a trustworthy brand providing useful advice. When using a different logo for a special initiative, for instance when cooperating with other actors, it is good practice to clearly mark the information as coming from the NCA to increase the credibility of the initiative and ultimately to increase the reach of the conveyed message.
38. The ESAs observe that some NCAs cooperate with private sector actors to deliver a financial education initiative. Although coordination with such partners can be difficult and time-consuming, it can create a far greater reach than if the NCA did the initiative alone by leveraging on these partners' networks. Especially in cooperation with partners/co-organizers from a different background than the public sector, the working style may need to be adapted for a successful cooperation.
39. To achieve good cooperation and thereby increase the reach of an initiative, the ESAs view it as good practice to ensure the commitment to the initiative at the highest level of the partner organization. It is also good practice to communicate these initiatives internally, across various levels of hierarchy within the NCA and ensure the commitment of all relevant actors.
40. The ESAs notice that for several initiatives, it is not straightforward to find the website via a web search. Only with the use of the precise search words can a consumer find an initiative, meaning they would specifically look for this website. However, for a website to become the go-to place for financial education, it should be easy to find, also for consumers who do not know about this website.
41. Hence, the ESAs view it as good practice that NCAs achieve good searchability so that the website comes up as one of the first search results in a search engine.

4.4 Planning of financial education initiatives

42. The ESAs understand that the cost of running an initiative can be very high when done well. For instance, for an initiative that developed a mobile app, the cost of the maintenance was higher than the cost for developing the mobile app, as there is a need for ongoing updates of the IT system and of the content of the app. Furthermore, to encourage the downloading of the mobile app, regular promotional campaigns need to be conducted.
43. Consequently, the ESAs view it as good practice to be mindful of the follow-up costs when developing an initiative to avoid wasting resources.

4.5 Assessing the effectiveness of financial education initiatives

44. The ESAs understand that for the largest part, NCAs currently assess the effectiveness of their initiatives by measuring the interest it generates, e.g., by measuring the visits on their websites or the download numbers of an app. However, this alone may not be enough to measure the effectiveness of the initiative to increase the financial literacy of consumers on the topic in focus of the initiative. Some NCAs use quizzes or tests that are integrated into the website as they can help to better assess whether the educational goals of the initiatives have been achieved.
45. Taking this into account, the ESAs view it as good practice to not only measure the attention an initiative generates but also the improvements to financial knowledge and ideally to financial literacy, which would imply measuring the changes in attitudes and behaviors.
46. Furthermore, the ESAs observe that some NCAs also assess the general level of financial education via nation-wide surveys and monitor their development. However, such assessments do not measure whether a specific initiative has been successful at increasing financial knowledge and improving financial literacy, including the attitudes and behaviors of the target group.
47. The ESAs view it as good practice to also apply a targeted approach to measuring the effectiveness of a financial education initiative, e.g., by conducting tests with focus groups and ideally assess their developments over time. An example of such an assessment can be to conduct an ex-ante and an ex-post survey or test amongst participants of a seminar and measure the evolution of their financial knowledge and attitudes and possibly follow up sometime later with yet another survey to measure whether their behavior has evolved. A further possibility is to conduct experiments, such as a randomized control trials where the financial literacy of a group of people exposed to the education initiative is compared to a group of people who have not been exposed to the education initiative.

4.6 Summary overview of good practices identified

48. The following table provides an overview of all good practices that this report has identified.

Number	Good practice
1	Provide warnings about scams and fraud in an accessible and timely manner: for instance, via the publication of a blacklist of fraudulent providers, examples of frequent scams, or helplines for consumers.
2	When publishing a list of authorized financial entities, avoid giving the impression that the NCA endorses their offers.
3	Inform young, technologically literate consumers on financial risks related to novel financial products and services linked with new technologies.
4	Foster the inclusion of tech-averse parts of the population by strengthening their digital skills by reaching out to them also via non-digital channels.
5	Work closely with teachers to understand their specific educational needs, develop adequate educational material for the teachers to use and test the training of the teachers as well as the educational material.
6	Include – where appropriate – fun and entertaining elements in the financial education campaigns, for instance through gamification.
7	Establish the NCA as a trustworthy brand providing useful advice and clearly brand information coming from the NCA to increase the credibility of the initiative and ultimately increase the reach of the conveyed message.
8	When cooperating with other institutions or actors to increase the reach of the initiative, ensure the commitment to the initiative at the highest level of the partner organization and across various levels of hierarchy within the NCA itself.
9	Achieve good searchability of the initiative’s website so that it comes up as one of the first search results in a search engine.
10	Be mindful of the follow-up costs when developing an initiative to avoid wasting resources.
11	Measure not only the attention an initiative generates but also the improvements to financial knowledge and ideally to financial literacy. The latter would imply measuring the changes in attitudes and behaviors.
12	Apply a targeted approach to measuring the effectiveness of a financial literacy initiative, e.g., by conducting tests with focus groups and ideally assess their developments over time.

5 Conclusions

49. The increasing level of digitalization offers many opportunities for consumers to manage their finances more conveniently and use their funds more efficiently. However, considering the increasing level of digitalization of services, paired with the reduction of physical offers and an ageing population, digitalization may also bear the risk of leading to greater financial exclusion and hence financial vulnerability. This being said, not only the elderly are exposed to risks online. Younger people may be technologically literate, but not necessarily cautious in terms of cybersecurity or financial risks. In order to strengthen financial resilience across the EU, the ESAs are of the view that it is not only essential for NCAs to strengthen the financial literacy of consumers in their Member States, but also to increase their digital financial literacy.
50. The initiatives analyzed in this report and the lessons learned demonstrate that there is a strong need for financial education on digitalization and especially on cybersecurity, scams and fraud. The challenge to NCAs is to adequately identify the specific needs of various target groups, develop appropriate solutions for them, communicate with them in an effective manner and ideally evaluate the improvements on financial literacy that these initiatives generate. The lessons learned and good practices presented provide for a variety of innovative approaches and solutions to these issues and will serve as an inspiration for the design and implementation of future financial education initiatives.
51. The ESAs are committed to continuing their coordination of national financial education initiatives at European level in order to strengthen the effectiveness of financial education and the level of financial literacy and to help, inter alia, to improve consumer protection and the responsible consumption of financial products. However, it is important to note that financial education and financial literacy will always remain a complementary tool and need to be supported by an appropriate regulatory and supervisory framework to protect consumers.

Annex I: Role of the ESAs in financial education

52. The three ESAs have been actively fulfilling their coordination mandate for their respective sectors:

- For the banking sector, the European Banking Authority (EBA) has published two repositories with more than 200 financial education initiatives by NCAs, published two reports on financial education, developed a factsheet for consumers on how to protect themselves when purchasing a banking product, developed a factsheet on financial education and literacy and organized a panel discussion on digital financial education and literacy in the Covid-19 context.⁹ EBA has also set up a Consumer Corner on its website, providing useful information to consumers, e.g. how to handle a complaint about a banking product or service.¹⁰
- For the insurance and pensions sectors, the European Insurance and Occupational Pensions Authority (EIOPA) has published an interactive European map of national financial education websites that consumers can consult.¹¹ EIOPA has also published two guides addressed to consumers: one that provides information for those who have a life insurance policy or pension from the UK and its treatment after Brexit¹²; and one that provides information to consumers related to their insurance coverage during the COVID-19 pandemic.¹³ Furthermore, EIOPA has launched an interactive page which provides information to customers on the different stages of buying and using insurance and pensions products¹⁴ and released a YouTube video summarizing the page's content.¹⁵ More recently, EIOPA has published a video directed to consumers in relation to the sale of credit protection insurance products.¹⁶ Furthermore, EIOPA is due to publish its Flash Barometer on Financial health of consumers on insurance products and services and more details will be available on EIOPA's website once published.
- For the investment and securities sectors, the European Securities and Markets Authority (ESMA) has actively promoted exchanges between NCAs regarding their experience and feedback on their financial education initiatives, in particular by organizing a financial education day on a regular basis. ESMA has also issued warnings and publications for consumers, such as the ESMA warning about contracts for difference, binary options, and other speculative products¹⁷. ESMA gives priority to actions aimed at achieving its investor

⁹ [Link](#) to the EBA's website on financial education.

¹⁰ [Link](#) to the EBA's Consumer Corner website.

¹¹ [Link](#) to EIOPA's interactive financial education map.

¹² [Link](#) to EIOPA's Brexit consumer guide.

¹³ [Link](#) to EIOPA's COVID 19 consumer guide.

¹⁴ [Link](#) to EIOPA's interactive page for customers of insurance and pension policies.

¹⁵ [Link](#) to EIOPA's YouTube video.

¹⁶ [Link](#) to EIOPA's YouTube video.

¹⁷ [Link](#) to ESMA's warning about CFDs, binary options and other speculative products.

protection objective, notably by providing input on some important investor protection topics linked to the Markets in Financial Instruments Directive II and is also engaging on regular basis with consumer representatives on this issue.

53. Additionally, the ESAs have also identified *common* opportunities to support NCAs on issues cutting across the banking, insurance, pensions, investment, and securities sectors. In the past, the ESAs have jointly issued warnings to consumers, e.g., on virtual currencies¹⁸ or on contracts for difference.¹⁹ Since 2021, the three ESAs have intensified their jointly conducted work on financial education and have, to date, delivered the following outputs:

- the organization of a high-level conference on financial education²⁰ that has been held in February 2022 and has helped in gathering ideas, stimulating the discussion on financial education, raising awareness, exchanging experiences as well as identifying good practices;
- the publication in January 2022 of a thematic repository collating 127 national initiatives carried out in the area of financial education and digitalization, with a focus on cybersecurity, scams and fraud.²¹ The repository aims to increase awareness of initiatives on financial education carried out across the European Union. It refers to initiatives across the banking, insurance, pension, and investment sectors. Most initiatives are addressed to consumers in general, although some target specific groups of consumers, such as retail investors, the elderly, students, children, young people, families, or other particular groups such as journalists and mass media representatives. The collection of all initiatives in a single repository may also be a source of inspiration for public bodies in charge of financial education;
- the organization in September 2022, of a workshop with NCAs on various financial education initiatives to facilitate the sharing of practical experiences in implementing national financial education initiatives;
- warnings to consumers on the risks of crypto-assets.²²

54. The role of the ESAs needs to be understood in the context of the European framework for financial education as well as European and international organizations working on financial education. In the EU, the responsibility for education – including financial education – is within the competence of the Member States. EU policy in this field is therefore designed to support actions at the national level and to help address common challenges, not to bring about convergence across the EU by prescribing particular approaches. To that end, the European

¹⁸ [Link](#) to ESAs' warning for consumers on the risks of virtual currencies.

¹⁹ [Link](#) to EBA and ESMA warning on the risks of contracts for difference.

²⁰ [Link](#) to the 3 ESAs' high-level conference on financial education and literacy.

²¹ [Link](#) to the 3 ESAs' thematic repository on financial education and digitalization initiatives.

²² [Link](#) to ESAs' warning for consumers on the risks of crypto-assets.

Commission joined forces with the Organization for Economic Co-operation and Development's International Network on Financial Education (OECD-INFE) to develop a joint EU/OECD dedicated financial competence frameworks for the EU, as part of its Capital Market Unions action plan.²³ Looking beyond the EU, it is the OECD, the International Organization of Securities Commissions (IOSCO) and the World Bank that have been among the key institutions which have elevated this subject to the broader international level.²⁴ In addition to national, EU and international institutions that engage in financial education, there are numerous private sector actors and non-government organizations that are active in this field, which are, however, not in the focus of this report.

²³ [Link](#) for more information on the actions taken by the European Commission under CMU Action 7 – Empowering citizens through financial literacy. [Link](#) to the EU Commission and OECD-INFE joint framework for adults to improve individuals' financial skills.

²⁴ A detailed description of the roles of these actors features in the EBA Report on Financial Education 2019/2020 ([Link](#)).