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Carolina Guerini

Donato Masciandaro

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Bocconi
BAFFI
Centre on Economics,
Finance and Regulation

Via Röntgen 1 | 20136 Milano – Italia | Tel +39 02 5836.5908/5564
baffi@unibocconi.it | www.baffi.unibocconi.eu

Financial Education between Market and State:
Private Commitment, Conflicts of Interest and Public Certification[♠♠]

Carolina Guerini[♣] Donato Masciandaro[♠]

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In any country, financial education can be driven by private and public interests. However, in both cases, trade-offs must be addressed and fixed. Private educators can elicit and educate individuals. However, as education is a credence good, quality-disclosure and conflict-of-interest issues can emerge. In parallel, public institutions can act as third-party certifiers, but political incentives that support inaction can produce quality-disclosure and conflict-of-interest issues. The aim of the article is to use marketing and economics as complementary methodological tools to offer a general analysis in which financial education is the outcome of both market and state forces. The framework is then applied to the case of Italy where, in recent years, private and public players have proposed financial-education initiatives, while a public certifier has also been active in this field.

Keywords: financial education, financial literacy, trust, education marketing, elicitation, quality disclosure, conflict of interest, third-party certification, political competition

JEL classification: D72 (Political Processes), G28 (Financial Institutions and Services: Government Policy and Regulation), G53 (Financial Education, Financial Literacy, L15 (Industrial Organization: Information and Product Quality), M3 (Marketing and Advertising)

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[♣] Cattaneo University LIUC and SDA Bocconi University.

[♠] Department of Economics and Baffi Centre, Bocconi University, and SUERF. The views expressed in this article are those of the author and are not the responsibility of the Italian Minister/Ministry of Economy and Finance.

1. Introduction

Trust in financial markets and institutions is key for safe macroeconomic growth. Trust can be defined as citizens' expectations that, on average, financial exchanges are dependable because the firms and professionals involved in the production and distribution of financial services and products are reliable in the sense that they perform actions that are beneficial or, at least, not detrimental for consumers given these actors' financial literacy and the state of consumer protection (Sirdeshmukh et al. 2002, Guiso 2010, Sapienza and Zingales 2012, van Esterik-Plasmeijer and van Raaij 2017).

In a market economy, a high financial-trust endowment of a given population can have several positive macroeconomic and financial consequences (Hastings et al. 2013, Lusardi and Mitchell 2023, Goedkoop et al. 2023). Moreover, given that any financial exchange entails promises (Jaffer et al. 2014), and given that citizens understand such promises, financial literacy can not only play a crucial role in influencing trust (Hansen 2012, van der Cruijsen et al. 2021a) but also directly affect individuals' risk profiles (Mohta and Shunmugasundaram 2023).

Financial literacy is an endowment of a country that can improve or deteriorate (Masciandaro 2023). The nature of financial literacy as a crucial country resource can be understood by considering the association between financial literacy and trust. In fact, empirical evidence shows that financial literacy is positively associated with more trust in financial institutions and supervisory authorities (Hansen 2012, van der Cruijsen et al. 2021a).

However, any relationship between trust and financial literacy must empirically tested. From a logical perspective, as Van der Cruijsen et al. (2021a) point out, knowledgeable consumers may better understand and appreciate the services provided by financial producers, which may enhance their trust. At the same time, increased financial knowledge could backfire, as knowledgeable consumers may be better able to identify the producers' limitations, which may reduce trust. An additional link can be highlighted, as another channel between trust endowment and financial literacy lies in the possibility that financial illiteracy may trigger financial crises (Boeri and Guiso 2008).

The special character of the financial-literacy endowment lies in the fact that the deterioration processes that can harm any education effort can negatively affect financial literacy and carry the associated problems, such as a lack of attention (Loewenstein and Wojtowicz 2023). The obsolescence of financial literacy becomes more likely the more financial-device phenomena occur. The intuition is straightforward: with the constant evolution of financial technologies, consumers become increasingly likely to be victimised by producers.

In fact, opportunistic and illegal behaviours among financial producers can reduce trust (Guiso 2010, Sapienza and Zingales 2012). In this perspective, financial illiteracy can be harmful. In the financial industry, customers cannot verify the quality of financial services without incurring some costs, as such services are "credence goods" (Dulleck and Kerschbamer 2006). In light of this knowledge asymmetry between producers and consumers, financial operators can be categorised as fair/skilled or unfair/unskilled (Berk and van Binsbergen 2022), and as honest or criminal (Barone and Masciandaro 2019). All else equal, a high level of financial illiteracy allows unfair, unskilled and criminal actors to offer their services, thereby increasing the likelihood of citizens unconsciously engaging in excessive risk-taking. Moreover, emerging technologies can increase digital-divide phenomena, fuelling the capacity of unskilled and criminal actors to involve citizens in their risky and/or illegal businesses (Teja 2023).

In the landscape of the technological and digital transformation that is permanently affecting the world's banking, insurance and financial sectors, financial-divide phenomena are spreading (Bis 2021). Consequently, the suitability of individuals' financial-literacy endowment is state contingent, as financial customers' knowledge needs to be continuously updated via financial education (OECD 2018 and 2022, Eba 2020, Bis 2021, Esas 2023).

Given these insights, the recent popularity of financial literacy as a research field (Stolper and Walter 2017, Goyal and Kumar 2021, Lusardi and Mitchell 2023), including the critical views (Willis 2011, Hasting et al. 2013, Clarke 2015), is not surprising. Some researchers have argued that recent economic crises, such as the Covid-19 pandemic and the rise of inflation, further highlight the importance of financial literacy for individuals and society (Lusardi and Mitchell 2023).

In light of the above discussion, and the link between financial-education policy and financial literacy (Alsemgeest 2015, Stolper and Walter 2017, Agasisti et al. 2023, Gemmo et al. 2023), a key question arises: What drivers can explain the state of financial education in a given country? Our starting point is to acknowledge that financial education is a credence good (Dulleck and Kerschbamer 2006) that can be produced by both private agents and public institutions. In fact, a key feature that characterises the production of financial education is the property that identifies any credence good: experts possess superior information relative to the users who interact with them (Dullech et al. 2011, Gottschalk 2018, Balafoutas and Kerschbmer 2020).

The more financial education can be considered a credence good, the more quality disclosure is needed. Quality disclosure occurs when a certification agency systematically evaluates the good's quality (Cason and Gangadharan 2002, Baksi and Bose 2007, Dranove and Jin 2010, Harbaugh et al. 2011, Farhi et al. 2013). The certification agency's goal is to produce the distinguishing features of disclosure: the dissemination of information about the product's quality and the use of standardised assessments. This ensures the third-party role of the certifier(s), who identify themselves as separate from the producers (Dranove and Jin 2010). The difference between certification and licensing requirements is notable (Kleiner 2000, Kleiner and Krueger 2013): a producer cannot offer education without a licence, but a producer can offer education without being certified.

In this perspective, we can identify two possible complementary roles for private and public actors in any country: private firms and institutions can produce education, while the public authorities should act as a third party that certificates education quality. In other words, financial education in a given country can be driven by private and public interests. In both cases, trade-offs must addressed and fixed. Private educators can elicit and educate individuals. However, as education is a credence good, quality disclosure and conflicts of interest can emerge. In parallel, public institutions can act as third-party certifiers, but political incentives that support inaction can harm such a function (Masciandaro 2023).

Therefore, the aim of this article is to using marketing and economics as intertwined methodological tools to analyse the state of financial education as the outcome of both market and state forces. We then apply the framework to a discussion of the Italian experience. Since 2017, private and public players in Italy have proposed financial-education initiatives, while a public certifier has also been active in this field.

The paper is organised as follows. Sections 2 and 3 present the private and public cost-benefit analyses, respectively, that can motivate activism in financial-education policies. From both perspectives, trade-offs emerge: quality disclosure and conflicts of interest on the one hand, and political incentives that support inaction on the other. In Section 4, we apply the proposed framework to the Italian case. Section 5 presents our conclusions as well as several avenues for future research.

2. Private Firms, Elicitation, Quality Disclosure and Conflicts of Interest

Financial literacy remains a serious problem, as the fact that many individuals lack financial knowledge produces negative spillovers on the micro and macro levels (Lusardi and Mitchell 2023). Without an understanding of financial concepts, people are ill equipped to make effective financial-management decisions, such as decisions about saving, investing, borrowing, and insuring. As a results, private firms are taking on the challenge of providing financial education. While these programmes have an impact, the involvement of private entities gives rise to some concerns.

These concerns mainly relate to three issues that inevitably affect quality-assessment and disclosure interests as well as potential conflicts of interest:

1. Private firms operating in the financial industry as well as education service providers may view education as a way to involve potential customers in typical supplier-customer relationships on the basis of well-known marketing paradigms.
2. Even if this is not the case, the outcome of such educational programmes may be uncertain due to the absence of an effective education-planning approach or due to the metrics employed to verify its effectiveness. As we outline below in our discussion of quality assessment in financial-education services, quality assurance is complex and influences the seller's preferred manner of quality disclosure.
3. A lack of trust in the firm and in financial institutions along with general wariness of sales pitches may prevent priority targets from becoming involved in financial education.

Referring to the first point, being in the field of credence goods, if a firm produces and/or distributes financial services. the producer/seller knows more about the type of good or service the user/buyer needs than the user/buyer herself or himself. Financial-services marketing uses various strategies and techniques to create and drive awareness of financial products, and to capture leads and convert them into loyal customers through ongoing marketing campaigns. As such, marketing activities are at the heart of narrow-scope or institutional trust, which defines people's trust in the financial firm providing the services they use (Masciandaro 2023). In addition, issues of quality assessment and disclosure arise.

Unlike most other industries, the financial-services industry is highly regulated and must adhere not only to marketing requirements but also to regulations introduced protect customers' interests. Moreover, education marketing – that is, the offering of education on specific topics or industries, and on the value of the benefits customers can derive from using a product or service to guide their purchasing decisions – is often a means to initiate a relation with potential customers. As such, education marketing is an important part of the marketing activities of private institutions operating in the financial industry.

Nevertheless, if financial education is not viewed as an independent activity in the sales funnel, then the customer will choose the offerings of the “educator”. As often verified in the digital environment, omnichannel solutions and unified data allow firms to understand each customer’s unique journey, predict behaviours and define communication in a way that drives conversion (Lewis 1908, Jansen and Schuster 2011).

In the process of education, assessing targets’ learning needs, learning styles and readiness to learn is the first step. Assessment includes determining what the targets already know, what they want and need to learn, what they are capable of learning, and the best way to teach them. At the same time, it is essential to identify the target (Lusardi and Mitchell 2014) or, in other words, the *buyer persona,* as not only customers’ needs but also several other customer features may vary and condition marketing performance. Private companies may also categorise targets according to their level of influence, power and involvement, as doing so helps the companies effectively prioritise and communicate with them in every stage of the customer journey (i.e., awareness, interest, acquisition, conversion). Briefly, a framework that starts with evoking customer needs and ends with providing financial education should target specific audiences, identify clear goals and the preferred educational approach, offer tailored content, and rely on rigorous evaluation metrics. In addition, the framework should allow private firms engaged in financial education to be successful, at least in terms of sales.

Given the proliferation of education initiatives in response to the low levels of financial literacy and its heterogeneity across the population, another task private firms must accomplish is “needs’ elicitation”. Various obstacles often prevent the perception of a need by potential targets or customers. Consequently, they will not actively search for financial-education and/or financial products and services, thereby missing financial-literacy upgrade opportunities. Numerous techniques allow for the “elicitation” of customers’ needs (Pacheco et al. 2018) in relation to increasing their interest in financial education, which is viewed as the first step towards engagement with financial matters and financial literacy. In front of the necessity to engage resistant targets (Stolper and Walters 2017), needs’ elicitation appears to be a good as to support individuals’ personal financial responsibility.

In short, thanks also to marketing practices the production of financial education by private entities can increase financial literacy which, in turn, could enrich the endowment of this credence good.

In this respect, Huston (2010) stresses that ‘‘financial literacy should be conceptualized as having two dimensions—understanding (personal finance knowledge) and use (personal finance application)’’ (in Stolper and Walters 2017, p. 306). Nevertheless, education formats are rarely measured in terms of such outcomes. Instead, private firms assess only the pure acquisition of knowledge or customer experience. More, Oehler et al. (2018, p. 206, Morris et al. 2021) argue that financial literacy is “not only the knowledge and understanding of financial concepts but also encompasses the skills, motivation and confidence to apply such knowledge in order to make effective decisions”. Accordingly, the assessment of consumers’ financial competence as well as the effect of financial-education initiatives on economic outcomes has attracted considerable attention in recent years, and the academic literature on financial literacy is rapidly evolving in the field of economics (Stolper and Walter 2017, Goyal and Kumar 2021, Lusardi and Mitchell 2023).

Notably, the effect of financial literacy on the quality of individuals' financial decisions is difficult to determine. However, interesting research outlines the impact of a financial-education programme on the financial knowledge and behaviours of teenagers. This research also considers manipulations of consumer choices through advertising, and conflicts between needs and wants (Lührmann et al. 2015). Although they offer some controversial results, studies searching for a clear correlation between financial education and behaviour suggest that financial *confidence* may play a role in influencing people to adopt better financial behaviours. The findings also point to the influence of learning capacity and financial knowledge on financial confidence (Morris et al. 2022). Again, however, private firms are rarely involved in the use of advanced education-evaluation metrics and probably never will be.

If the initiator of financial education is a private firm, it is important to determine whether the goals of that education overlap with public aims. In addition, some private institutions will likely plan and define education initiatives that, on the basis of the previously outlined framework, are suitable for converting education customers in financial services demand. *Funnel-marketing* strategies and marketing policies based on *buyer persona* profiles – that is, humanised portraits of the targeted customers – are directly aimed at that objective. As in a supplier-customer relation, although adopting digital-marketing paradigms has clear advantages, a conflict of interest may arise if potential customers are attracted through education.

In other words, given the general interest in educating inexperienced individuals as a way to strengthen their capacity to make financial decisions in a world characterised by systematic complexity, private financial educators can be effective. However, the potential gains of private educators depend on two conditions. First, the education services must be suitable, where suitability, given the level of complexity, implies both a semantic and conceptual challenge (McMahon and Naylor 2023), and consistency with the user's needs. Second, the private educator's incentive structure can create a conflict of interest (Stolper and Walter 2017).

The producer of a credence good can identify the quality that fits the user's need, which leads to two options: providing the right quality and charging consistently for it; or mis-selling or defrauding (Dulleck and Kerschbamer 2006, Dranone and Jin 2010, Dulleck et al. 2011, Stolper and Walter 2017, Gottschalk 2018, Balafoutas and Kerschbamer 2020). As such, undertreatment or mistreatment are always possible with credence goods. Advisors are experts who typically possess more information than their clients about the fit between an asset's characteristics and a client's preferences, and they might have misaligned incentives because their income consists, in part, of commissions. Along these lines, Inderst and Ottaviani (2012a) show that financial advisors generally prefer to recommend financial products that are aligned with their own personal interests (e.g., products with high commissions). Similar results are presented by Anagol et al. (2017), who analyse insurance advice in India in which several auditors seek advice on life-insurance products from insurance agents. One of their key findings is that insurance agents commonly recommend products that do not cater to the consumers' needs but, instead, increase commissions.

Bester and Dahm (2018) show that the first best can always be obtained if diagnosis and treatment can be separated by contracting with two different experts — a diagnosis expert and a provision expert. Intuitively, this could eliminate experts' incentives to make an inappropriate treatment recommendation, as they will not reap any financial benefits from doing so. In our focal context, diagnosis should address the issues of quality assessment and quality disclosure, which could, in turn, increase welfare even if service features remain unchanged. This points out the importance of quality assessment and disclosure.

When it comes to quality issues (point n.2), sellers often do not disclose the quality of their offerings. Theory predicts that firms are more likely to offer quality disclosures if related costs are lower, product quality is higher or the expected benefits of disclosure are greater, conditional on quality and disclosure costs. One purported benefit of disclosure is that it facilitates better matches between consumers and products. Consumers may migrate towards higher-quality sellers (i.e., "vertical sorting") or toward sellers whose product characteristics best meet their idiosyncratic needs (i.e., "horizontal sorting") (Dranove and Zhe Jin 2010).

In addition, some have argued that the nature of the response depends on whether the disclosed information is easy to access and understand, and whether consumers pay attention to disclosures. In this regard, physical quality (id est: technical and functional quality) and perceived quality may be distant (Parasuraman et al, 1991). Moreover, quality itself is hard to define in relation to services due to their immateriality. One should, therefore, distinguish between that quality which affects the way services are defined and distributed, and the driver of consumers' satisfaction and experience, which are strongly influenced by emotional and social drivers and can only be measured ex post, id. est after consumption.

The physical quality of education is affected by the design and delivery process. Research in the education field indicates that certain ways of designing and targeting financial education can promote welfare-enhancing financial behaviour. These solutions include ensuring financial education is simple and actionable, personalised to individuals' needs and situations, timed to coincide with decisions, convenient to access, entertaining, and targeted at those who are primed to learn, such as youths and young adults. The focus on physical quality also suggests a need to conduct pilot tests before implementation (AFI 2022). Taking the entire process of defining and delivering education services into account, marketing theory lists additional components that affect the likelihood of success. These include targeting; design (i.e., tailor-made initiatives or initiatives with a broad subject targeted at a broader audience; e.g., consumers in general); the scale of the audience; the format or channel; the output to which customers have access (from traditional outputs, such as leaflets and guides, to new, online tools that offer new possibilities to obtain financial information, such as apps and social-media games). Last but not least, *content creation* is essential. For example, plain language and jargon-free content may be a means of success with certain targets, while video games and edutainment may be the best tool to acquire and satisfy other (younger) targets (Aprea et al. 2018, Schulthaus and Aprea 2021).

Today, the consideration of financial-education networks is welcomed, as well, as a driver of quality (EBA 2020). Cooperation agreements with partners are also regarded as a valuable tool, as they create a multiplier effect. More specifically, complimentary partners tend to use a variety of channels to approach the target group, thereby increasing not only awareness but also demand coverage.

Vice versa, ex post quality assessment and perceived quality tend to be conceptually referred to and actually measured in terms of customer experience**.** Researchers in the fields of public administration, marketing and management stress the importance of service experience. The procedural fairness of the service (Berg and Dahl 2019; Tyler 2006; Van Ryzin 2011), the values the service represents (Taylor-Gooby and Wallace 2009), the participation in and coproduction of the service (Fledderus, Brandsen and Honingh 2014), and the general satisfaction with the service experience (Van Ryzin et al. 2007; Vigoda-Gadot and Yuval 2003) have all been suggested as drivers of trust.

The consideration of education and learning as a process forces to focus on the quality of the learning experience and the context in which learning takes place. Bitner's (1992) *servicescape* model stresses dimensions of the physical environment in which the service takes place. Other scholars have expanded the concept by adding dimensions of the social environment. Researchers measure the environment dimensions and influence on affective and behavioural responses in many different service settings using qualitative and quantitative data (Lin et al. 2020). Although there is no direct empirical evidence of the role of the servicescape in determining the perceived quality of financial-education services, social and emotional aspects play a role in consumers' satisfaction and experience. In addition, consumers' overall experiences will be influenced by the general atmosphere during the delivery process and by the type of engagement. In this respect, physical and perceived quality are linked, as the servicescape may be digital, and delivery channels and omnichannel planning could increase educational effectiveness. Moreover, interest in the service interaction and how service experiences shape trust goes beyond a passive evaluation of trustworthiness towards process-based trust, as stressed by Nikolova, Möllering and Reihlen (2015) and Berg and Johansson (2020).

Referring to quality issues, the customer's experience in the educational field (often synthetized by marketers on the basis of an NPS-score) becomes the simplest comparative way of acknowledging quality from a customer-centric perspective. Thus, beneath the potential conflict of interest of private firms, the issue of quality assessment and disclosure becomes evident. As traditional private educational programmes do not employ advanced sets of metrics, they lack a measurement of financial literacy in its conceptual complexity and offer only a partial answer to the issue of quality assessment and quality disclosure.

More, also the perspective adopted by marketers is not hassle free. Contributions to the definition of financial-education quality can be found in the behavioural science, which aim to understand human cognitive processes and behavioural interactions between individuals through analyses of the findings of other disciplines, such as anthropology, psychology, sociology, pedagogy, social marketing and economics. These contributions stress that human behaviour is influenced by biases which may, in turn, explain consumer behaviours that seem incoherent or irrational (IOSCO and OECD 2018). Such research results are useful for developing financial-education initiatives, as both producers and quality-certifying agencies might benefit from the analytical tools developed in behavioural economics. Those tools may help identify the products that are the most detrimental to consumers; the mistakes consumers are most likely to commit and the underlying reasons; and how marketing and sale strategies affect consumer behaviour. A deeper understanding of these findings is essential. If we are to introduce more efficient disclosure regimes and ensure an appropriate degree of consumer protection, we must first establish the extent to which consumers can be held responsible.

Given the huge complexity of the issues of quality assessment and disclosure in financial education and the difficulties implied in considering different analytical perspectives, Unesco has proposed a simplified education-quality framework based on five dimensions. This framework suggests a mixed system of quality assessment that properly combines a priori and ex-post features (Unesco 2004, p. 36):

a) learner characteristics, including learner aptitude, perseverance, readiness for school, prior knowledge, barriers to learning and demographic variables;
b) context, including public resources for education, parental support, national standards, labour-market demands, socio-cultural and religious factors, peer effects, and time available for schooling and homework;
c) enabling inputs, including teaching and learning materials, physical infrastructure and facilities, and human resources;
d) teaching and learning, including learning time, teaching methods, assessments and class size;
e) outcomes, including skills in literacy and numeracy, values, and life skills.

Finally, referring to point n.3, with respect to the issue of trust in financial institutions and its link to education as well as the relations among narrow-scope trust, broad-scope trust and social trust (Sirdeshmukh et al. 2002, Hansen 2012, Van Esterik-Plasmeijer and Van Raaij 2017, Van der Cruijsen et al. 2021b), further considerations can be added.

Trust plays a role in education in numerous ways. It arises from the complex interplay of beliefs, expectations, experiences and situational aspects. The willingness to subject oneself to another's actions relies on the perception of that actor's *trustworthiness*. Perceived trustworthiness can lead to *trusting practices* on the part of the trusting party – that is, behaviour that is based on trust (Alarcon et al. 2017, Colquitt et al. 2007, Bormann and Thies 2019).

Recent studies underscore opportunities to improve both education and trust in order to support access to global capital markets. Survey findings reveal knowledge barriers to investments and a general positive attitude toward education among potential customers. In fact, an extremely high percentage of the population would be more willing to address financial issues given an expanded financial education (World Economic Forum 2022). Nevertheless, some evidence suggests mistrust in financial institutions or in private firms engaged in financial education, which could negatively affect access to the financial-education initiatives they organise. Thus, perceived trustworthiness is an essential aspect that should be considered if the issue of public certification arises.

If we focus on the link between institutional trust and education, additional relations emerge. Institutional trust is composed of two subtypes. *Trust toward institutions* reflects the perceived effectiveness and efficiency of the institutional order in accomplishing the guiding principles of an institution (Lepsius 2017). *Trust because of institutions* refers to "the background of institutional safeguards influencing … decision making and actions" (Bachmann 2018, p. 219, Zucker 1986, p. 61, Borman et al. 2021). On the one hand, institutional trust plays a role in ensuring access to planned events and educational involvement, and in allowing for the diffusion of financial knowledge and a potential increase in financial literacy. On the other hand, institutional safeguards may be favoured by political interventions.

General social trust (as conceived in this context) is an important outcome of political intervention and influences institutional trust. Therefore, our understanding of the development of trust should embrace the reciprocal relationships between the micro and macro perspectives (Lumineau and Schilke 2018), as trust is an inherently multi-level phenomenon. Nevertheless, although most researchers agree that trust forms the foundation for educational processes and contributes to educational attainment, this research field has not been investigated in detail.

From a marketing perspective, whether the brand identity and brand purpose of private firms engaged in financial education represent one of the main drivers of trust (Ronson and Farkuhar 2014, Berry 2000, Stensaker and D'Andrea 2007) and, consequently, drive customer preference isn't questionable. Brand associations, reputation and purpose should probably be considered if the quality assessment if referred to the initiative proponent or if one questions how to favour access to private initiatives**.** More clearly, marketing contributes to brand affirmation and trust creation by delivering value-added content at every stage of the buyer's journey. A well-designed sales funnel drives conversion and increases sales because it guides customers through purchasing, upselling and loyalty. Education-marketing programmes that are well executed also cut through the incessant drumbeat of low-value, high-volume marketing "noise" and credibly position companies with the coveted status of "trusted advisor" (Manea and Purcaru 2017).

Taking stocks from all previous considerations - though any appreciable effort of private service providers in financial education- as private firms' use of typical marketing techniques, clear harmful consequences condition in terms of policy performance:

a) A preference for some targets or buyer personas despite the existence of other clusters in need. As demand-side factors can contribute to financial exclusion and, in particular, financial vulnerability caused by personal circumstances, a lack of financial literacy, low social and technological inclusion, and cultural and psychological barriers (Atkinson and Messy 2013), a strong financial-education planning system should monitor these circumstances in order to ensure financial inclusion. In other words, financial-education exclusion can represent a straightforward case of market failure. Consequently, the public hand should directly intervene as a producer of financial education or, at least, assume a coordination role.

b) The use of education as a trigger for commercial goals. As discussed above, although financial education fits with marketing praxis and although some of its objectives, such as awareness, appear to be highly appreciable, financial education should be independent from conversion objectives and focus solely on responsible behaviours. This is important not only for private institutions operating in the financial industry but also for education firms. In addition, the use of artificial-intelligence models may give rise to consumer-protection issues other than data protection, as they may enable the exploitation of customers' data patterns to maximise profit without consideration of customers' interests, thus leading to misconduct (EBA 2019). Therefore, the independence of the financial educators requires certification.

c) A preference for some needs over others based on the company's product/service portfolio. For example, digital financial services create numerous new challenges in efforts to ensure effective financial consumer protection owing to the lack of familiarity with these new tools, and the low level of financial and digital literacy, including consumers' inadequate or insufficient awareness of the value of their data. Issues related to transparency, disclosure, and the communication of terms and conditions also arise. In addition, consumers are exposed to new risks, including the risk of mis-selling, fraud, the misuse of personal financial data, digital profiling, cyber-crime (e.g., phishing, hacking attacks) and behavioural issues, such as excessive borrowing (EBA 2019). The latter issues are addressed by fintech companies but rarely considered by other types of private firms. One more case of market failure evidently emerges.

d) Inhomogeneous endowments of quality and performance metrics used in private educational offerings, and temporal discrepancies between delivery and financial-literacy outcome measurements.

Moreover, private firms that offer financial education do not necessarily end their process with the monitoring phase. If they do, according to Harvard University's list of skills that make an educated person, the top qualities to measure would be the abilities to: define problems without a guide; ask hard questions that challenge prevailing assumptions; quickly assimilate needed data from masses of irrelevant information; conceptualise and reorganise information into new patterns; think inductively, deductively and dialectically; and attack problems heuristically. Due to the difficulties of measuring the quality of educational offerings, most satisfaction and experience feedback focuses on aspects of the servicescape or on the NPS score. In contrast, final exams are used to measure knowledge. In sum, given that *financial capability* is the ability of consumers to use their acquired financial literacy to make better-informed decisions about managing their finances, it appears highly improbable that financial capability can be achieved through private education initiatives. Similar considerations can be added if we consider the KAB scheme preferred by international standards (see Appendix) (Schrader and Lawless 2004).

As successful education-intervention outcomes and performance improvements are not limited to knowledge gains, behavioural changes in the short and long terms (Lawless et al. 1997) should be measured as well. Furthermore, as attitudes may change after education, this may be a third important parameter in assessing financial literacy. As a result, following the OECD INFE guidelines, interventions and their evaluations should involve all three domains. Although there is no widely accepted definition, standard digital financial-literacy measurement tools are internationally recognised (Uthaileang and Kiattisin 2023), and demonstrate the conceptual and practical necessity of going beyond knowledge and experience when measuring financial literacy.

The simplified set of metrics used ex post by private firms is highly dependent on the temporal discrepancy between the delivery of the education services and the necessity of using the acquired capabilities. In addition, financial institutions may encourage policy makers to employ financial education as a way to reduce or limit more effective consumer-protection regulations (World Bank 2014).

Notably, private firms sometimes offer surveys aimed at assessing financial behaviour (in, e.g., Argentina, Italy, the Philippines and Spain). Although these research tools are not specifically focused on financial-literacy needs, they permit the segmentation of households according to their financial assets, indebtedness and attitudes towards financial risk. This can also serve as a measure of financial-literacy needs in such policy areas as saving for retirement or insurance based on, for example, ownership of savings and investment products, or existing insurance coverage.

Concluding, the potential misalignment of interests must be recognised and the involvement of private stakeholders should be designed in such a way as to enhance efficiency and outreach. In addition, to the greatest extent possible, the conflicts of interest that can arise when commercial institutions are involved in financial education must be identified and addressed. In this regard, the independence issue emerges again.

The direct involvement of private stakeholders in financial-education initiatives should be designed and developed in a way that ensure educational activities can be clearly distinguished from commercial and marketing activities. Those education activities must also match public goals. Moreover, a negative bias has been found (Huseby 2000), meaning that negative experiences have a stronger effect than positive experiences, which supports the idea that trust is more easily destroyed than gained (Slovic 1993). Therefore, consumers' interests should be prioritised. This requires ensuring that:

a) financial providers refrain from using education initiatives to promote their own products and services;
b) the conflicts of interest of organisations and individuals in carrying out awareness, communication and financial-education activities are disclosed and managed;
c) educational resources are distinguished from commercial materials and continuous marketing strategies differ from ad hoc initiatives;
d) educational programmes that aim to allow participants to experience what they are learning (i.e., experiential learning), and favour both financial knowledge and financial capabilities, are in focus; and
e) adequate metrics are implemented depending on the type and goal(s) of the initiative and the channel used, thereby ensuring initial assessment, the tracking of individual progress and the programme's outcome.

As pointed out under point v., both organisational and national strategies should include evaluations that combine quantitative and qualitative data as an essential element of educational programmes' implementation. This would ensure the identification of the most effective types of initiatives and delivery channels based on the needs of the target audiences. It would also enhance national and international knowledge of effective approaches, and promote the accountability and sustainability of financial-education policies and initiatives. Nevertheless, as quality assessment and quality disclosure are extremely complex and require:

a) the identification of the drivers of physical and perceived quality,
b) a clear indication of the role of these drivers in determining the expected output (e.g., awareness, knowledge, trust), and
c) coherent metrics that allow for the quantification of each driver and enable comparability.

We have also highlighted a need to distinguish between a priori and ex post assessments, especially if the objective is quality certification in financial education. Finally, as far as trust is concerned, the complex interplay among social trust, narrow-scope trust and broad-scope trust leads to further reflection. This is because quality assessment in financial education is comprised of proponent quality and offering quality.

3. Politicians, Financial-education Activism and Public Certification

The starting point in analysing the public role in the production and distribution of financial education is to assume that the country under observation is a democracy. Therefore, all else equal, the elected government can view the protection of the literacy endowment as its own mission and, consequently, be active in designing and implementing financial-education policies that can strengthen financial literacy.

Theoretically, the arguments that we are going to develop are based on three pillars: financial literacy is a national resources, and obsolescence characterizes its status; financial education is the supply of a credence good; policymakers are politicians (for a formal model see the Appendix).

How can we describe the politicians who are part of the incumbent government? In general, two types of cases can be analysed. The *helping-hand view* (Pigou 1938) assumes that the politician acts as a social planner and wishes to please all inhabitants rather than a particular constituency or lobby (Shleifer and Vishny 1998). In contrast, according to the *grabbing-hand view*, politicians are motivated by a desire to please specific, well-defined voters in order to increase their support. In our case, we use the helping-hand view as a benchmark for evaluating the actual behaviour of a politician, taking the political costs and benefits of an economic-policy choice into account. Notably, being the helping-hand politicians in any case career concerned players (i.e., they care about consensus in order to remain in charge) they acknowledge that constituencies in the population exist, and that can matter too.

At the beginning of any electoral period, the politicians in charge acknowledge the existence of uncertainty in the political game. They politicians decide on the extent of their financial-education activism, which will preserve the literacy endowment that will be inherited by the next government. As we discuss below, any activism decision carries both political benefits and costs, as certain constituencies within the population are likely to be in favour of and against financial literacy, and as any policy implies the use of public resources with a corresponding opportunity cost. Therefore, the politicians in charge will discount the uncertainty of remaining in power.

Some citizen constituencies may view financial-education policies as a positive social investment that can reduce the deterioration of financial literacy. These constituencies are motivated by the fact that the literacy endowment, through its links with public trust, can have positive macroeconomic effects. First, a higher level of trust increases financial stability (Guiso 2010) in normal times, and reduces the likelihood of extraordinary times caused by systemic banking and financial crises. Second, a higher level of trust is associated with the expansion of the banking and financial industry as a whole, with positive spillovers in terms of savings and investments (Jaffer et al. 2014).

Greater financial literacy may, in turn, be associated with better wealth allocation (Guiso and Japelli 2009, Von Gaudecker 2015, Guiso and Viviano 2015, Gemmo et al. 2023), planning (Lusardi and Mitchell 2011, Billari et al. 2023), remuneration (Deuflhard et al. 2019) and accumulation (van Rooij et al. 2011, Calcagno and Monticone 2015). However, the link between financial literacy and economic choices needs further exploration. For example, the effects of financial literacy on mutual-fund investments do not always seem consistent with rational planning (Aman et al. 2024). In any case, the more the link between financial literacy and macroeconomic performance is effective or, at least, is perceived as effective, the more public and private constituencies are likely to favour financial education.

With regard to public constituencies, the activities of the supervisory authorities will be more effective if financial literacy and trust are correlated (Van der Cruijsen et al. 2021a). The same is true for any public institution involved in the design and implementation of financial-education policies. With respect to private constituencies, and consistent with the analysis in the previous section, if we assume that skilled professionals benefit from information disclosure (Grossman 1981, Berk and van Binsbergen 2022) and that the effectiveness of disclosure increases as financial literacy improves, then skilled professionals can be a financial-education constituency.

Yet, in order to build a complete political cost-benefit analysis, we must acknowledge that the politician in charge may benefit from financial-education inaction. In general, politicians prefer the status quo when loss aversion characterises their goal functions. In such situations, inaction becomes the optimal economic-policy strategy (Alesina and Passarelli 2019). Loss-averse politicians are an extreme case of conservative players – "pigeons" – as they dislike any kind of active policy (Favaretto and Masciandaro 2016). In the behavioural literature, given the status quo, individuals perceive outcomes as gains or losses, and losses loom larger than gains (Kahneman and Tversky 1988).

Loss aversion has increasingly been viewed as relevant for explaining political behaviour (Quattrone and Tversky 1988, Berejikian 1997, Druckman and Lupia 2000, Mercer 2005, Soroka 2014, Sheffer et al. 2018). In our case, if the politicians in charge feel that activism in financial-education policy may have more political costs than benefits, they may view inaction as the optimal strategy given the scarce availability of public resources.

Moreover, politicians can view inaction as optimal if they are influenced by financially illiterate constituencies. In other words, inaction in designing and implementing financial-education policies may be convenient for the politicians in charge. Such inaction can be facilitated by the fact that financial education is a credence good, as highlighted in the previous section. Politicians may have superior information on the quality of the good that they are going to provide, as in the case of public infrastructure (Dulleck et al. 2013) or budgetary issues (Dulleck and Wigger 2015). Therefore, they can calibrate the quality of the financial-education policy in a way that fits their own cost-benefit analysis.

On the other hand, constituencies in the same population may explicitly or implicitly view financial-education policies as useless or costly, or even view financial illiteracy as beneficial. To understand why some individuals may view inaction in financial-education policies as beneficial, we must acknowledge that financial illiteracy can increase the activities of unskilled, unfair or illegal actors. If we view any financial producers that gain from interacting with naïve citizens as unskilled/unfair actors, we can assume that these operators will favour higher levels of financial illiteracy. In parallel, some skilled consumers would like to live in a world characterised by high financial illiteracy, as this would facilitate fraudulent conduct in networks where the melding of technology and financial services is calibrated to accommodate citizens who, on average, are naïve (Griffin et al. 2023, Bian et al. 2023).

In general, the relevance of such actors can depend on other policy drivers, such as financial regulation. The presence of unskilled/unfair actors in a given country can be influenced but not completely eliminated by financial-regulation devices, such as disclosure obligations (Inderst and Ottaviani 2012a, 2012b, 2012c), licensing requirements and certification processes. For decades, information disclosure has been a crucial part of the policy maker's regulatory toolbox (Ben-Shahar and Schneider 2004).

However, the effectiveness of such regulation is controversial, as the breadth and depth of most disclosures render them unintelligible and obscure (Bakos et al. 2014, Pollach 2005) due to consumer illiteracy (Mak 2012). Consequently, unfair actors can deliberately misrepresent legal provisions to the disadvantage of consumers (Furth-Matzkin 2017, Wilkinson-Ryan 2017). Moreover, even regulatory activity can depend on political considerations (Stigler 1971). In particular, the policy maker may find it optimal to tolerate a certain amount of unskilled/unfair actors (Berk and van Binsbergen 2022, Kadens 2023).

Finally, constituencies and/or individuals may oppose financial education for genuine conceptual reasons. They may, for instance, question whether education can effectively improve households' financial knowledge, or stress that the belief in the effectiveness of education lacks empirical support, that an endemic gap exists between the velocity of change in the financial markets and the state of consumers' skills and that, in general, resource scarcity characterises financial educators' activities (Willis 2011).

Under these assumptions, we can show that the politician's level of activism in implementing financial-education policies is positively associated with financial-instability risks, financial-illiteracy costs and the planning horizon of the politician in charge (Masciandaro 2023). With regard to the latter, and consistent with a general result, a longer time horizon, lower psychological attitudes towards the status quo, and a higher probability of re-election increase financial-education efforts.

Given this overall analytical framework, what are the consequences of a public agency taking on a third-party certification role? In the previous section, we highlighted how quality assessment and task disclosure can be difficult and complex tasks. Moreover, we have outlined the need to distinguish between a priori and ex post assessments, especially if the objective is quality certification in financial education.

Firms seek external endorsements from third-party actors because such endorsements reduce the uncertainty surrounding their capabilities and quality (Rao 1994; Wade et al. 2006). Endorsements decrease information asymmetries regarding the firm's inherent quality, especially in uncertain markets (Sanders and Boivie 2004). Third-party certification is a type of signal that external stakeholders can easily recognise. In addition, it enables stakeholders to assess capabilities that they cannot measure (Rao 1994). Third-party accreditations and certifications can also provide legitimacy or signal trustworthiness about an organisation and its products or services. With few exceptions, the vast majority of research on these labels focuses on their benefits.

In cases where the third-party certifier can be a public body, we can examine the conditions under which such an agency can perform its disclosure role, addressing an unpleasant trade-off in developing the certification test, given that uncertainty and asymmetric information characterize real world situations: on the one hand, higher certification standards can increase the benefits of reducing the number of low quality financial educators while, on the other hand, such standards can penalise high quality educators. (See Appendix One).

At the same time, quality certification can be negatively affected by a series of well-identified problems. The first problem in ex post assessments arises when quality certification is based on consumer feedback which, in turn, can be negatively affected by noisy data. In fact, consumer ratings may be biased by heterogeneity in the consumer sample or by mis-representation. Moreover, they may be unverifiable (Dranove and Jin 2010, Glazer et al. 2008, Miller et al. 2005). However, this could also be an issue in the case of ex ante certification if the information set that the certifier uses is supplied by the producers.

The second problem concerns the fact that potential conflicts of interest can harm the actions and reputation of the certifier. The extant literature (Flegm 2005, Beaver et al. 2006) has explored the case of private certifiers (e.g., consulting firms and credit agencies) in detail. In our case, the more a public agency can be captured by private constituencies that are against financial literacy, the more the certification is likely to be ineffective. Therefore, the institutional setting must guarantee the independence of the public agency as well as the transparency of its decisions, taking inspiration from the literature devoted to central bank independence, and distinguishing between de jure and de facto independence (Romelli 2022).

In general, the certifier’s incentive problem can be mitigated through competition, reputation, external monitoring or isolation (Dranove and Jin 2010). Unfortunately, the role of competition is, in general, ambiguous (Lizzeri 1999, Albano and Lizzeri 2001, Hvide and Heifetz 2001, Miao 2006, Farhi et al. 2008). Moreover, in the case of financial education, any public certifier established by law is likely to operate as a monopolistic agency.

Reputation cannot be considered an automatic correction for certifiers’ biases. Users can take a long time to evaluate a certifier’s reputation (Benabou and Laroque 1992), especially if a large fraction of those users are naïve consumers (Bolton et al. 2009), or if the correlation between the overall reputation of the certifier and its certification performances is low (Mathis et al. 2009). In the case of a public body acting as financial-education certifier, reputation mechanisms are difficult to design, as, by definition, users are likely to be naïve players. At the same time, the more the public certification of the quality of financial education is the only function of the focal public body, the more likely reputational incentives are to emerge.

In addition, we face the well-known question of who certifies the certifiers (Dranove and Jin 2010), which has been addressed in general in the literature on the governance of bureaucracy, including the above-mentioned case of central banks as certifiers of the safety and soundness of banking firms (Frisell et al. 2009). The establishment of an external certifier would be particularly difficult to handle in the case of a public certifier of financial education.

One possible solution to the incentive problem among certifiers is to completely isolate them from any selling activity and any seller’s influence (Schaefstein and Stein 1990, Ottaviani and Sorenson 2006). All else equal, the isolation of the public certifier can be ensured through the design and implementation of rules of conduct and guidance on transparency designed to govern the public agency's actions. This again highlights the importance of independence.

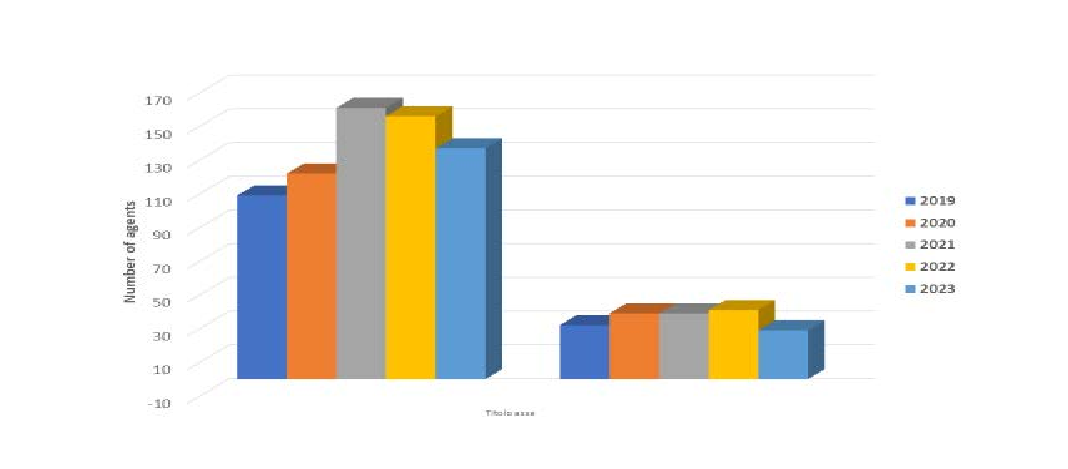
4. The Italian Case: Private Education and Public Certification

An important aspect of diagnostic work is mapping existing financial-education programmes. We must review all implemented initiatives so that subsequent strategies and future programmes can be informed by experience, benefit from lessons learned, avoid duplication, and rely on an understanding of successful programmes and delivery channels (Bis 2014). In this respect, an analysis of Italy can offer interesting insights given the state of its financial literacy (see the Appendix).

Our examination of the financial-education initiatives offered by private and public entities in Italy exclusively refers to activities undertaken in October. This is because the Edufin Committee – the Italian Committee established in 2017 to coordinate financial-education activities – promotes a *Financial Education Month* (FEM) each year in October. Both private and public players can ask the Committee to use the FEM brand in the dissemination of initiatives aimed at increasing financial literacy and ensuring efficient planning for personal and family resources. The use of the brand is allowed if the initiative's design and implementation are consistent with well-defined, systematic guidelines that the Committee established when it launched the FEM programme. Therefore, the FEM activities can be viewed as a case of third-party public certification.

An overview of the financial-education activities offered in October from 2019 through 2023 provides a picture of the engagement of private and public entities as well as the number and types of financial-education initiatives. This overview highlights the important role of private firms as organisers (Figure 1). The number of private participating agents grew from 2019 to 2021 (the peak year in this regard), while the number of public institutions involved was generally constant.

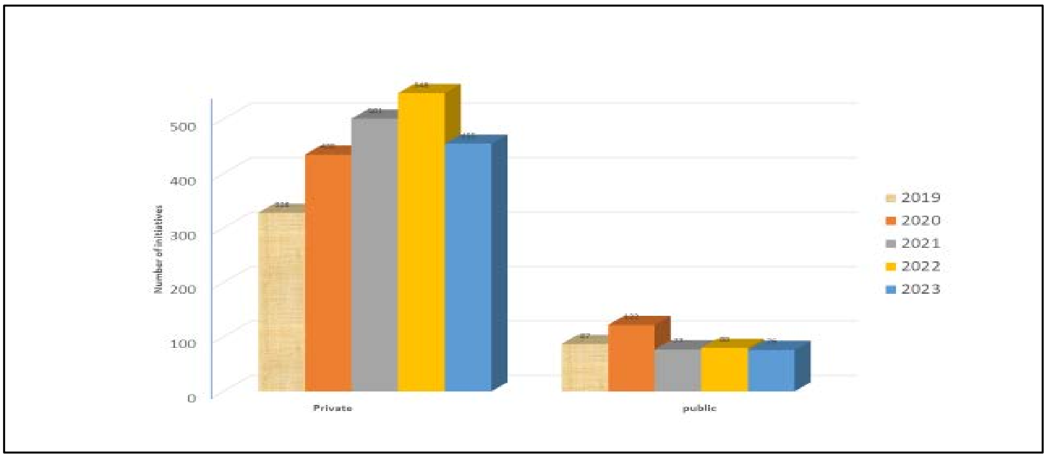
Figure 1: Number of proponents – private firms and public institutions (2019-2023)



Source: Edufin Commission, FEM, 2019-2023

Similarly, the number of public and private initiatives undertaken in the same timeframe appears to have grown and then decrease over time (Figure 2). Notably, private entities offered the highest number of financial-education initiatives in 2022, while public institutions did so in 2020. In 2022, which represents the peak, 628 financial-literacy initiatives were offered to participating targets.

Figure 2: Number of initiatives launched by private firms and public institutions (2019-2023)



Source: Edufin Commission, FEM, 2019-2023

In general, a high number of financial-education initiatives were offered to the Italian Community in the month of October, reaching 531 in 2023.

It is also possible to depict the composition of the proponents. Four clusters emerge.

- *Cluster a* is composed of for-profit entities that offered financial services, social security or insurance products. This cluster included banks, insurance companies, stock markets, financial agents or consultants, and financial intermediaries licensed under national and European laws on financial or payment services for commercial purposes.

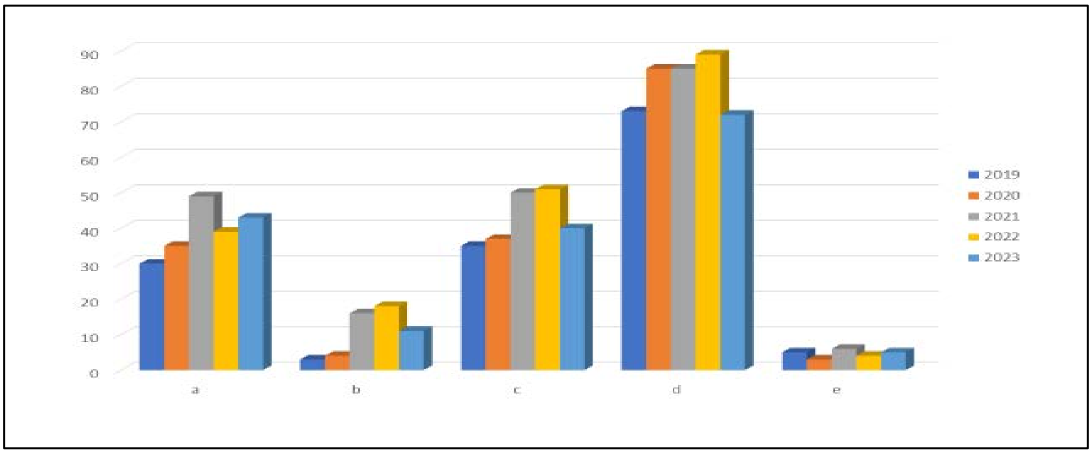
- *Cluster b* is composed of non-financial firms that offered financial, social security or insurance education for profit as professional entities that organised financial education for third parties, consultancy agencies, communication agencies, agencies that managed websites and social-media platforms.

- *Cluster c* comprises non-profit proponents linked to the financial industry as associations and foundations backed by banks, insurance or financial companies; private and public welfare institutions; third-sector associations, NGOs, consumer bodies, trade unions and research institutions; and municipalities, regions and other public bodies.

- *Cluster* (d) includes the Edufin Committee, its components and the CDP (Deposit and Loans Fund) institution.

The most important cluster in terms of number of proponents is (d) – that is, non-profit organisations linked to the financial industry. In contrast, cluster (b) is the least crowded. Figure 3 also indicates an increase in the number of for-profit entities involved in education initiatives and an increase in the number of institutions in cluster (e).

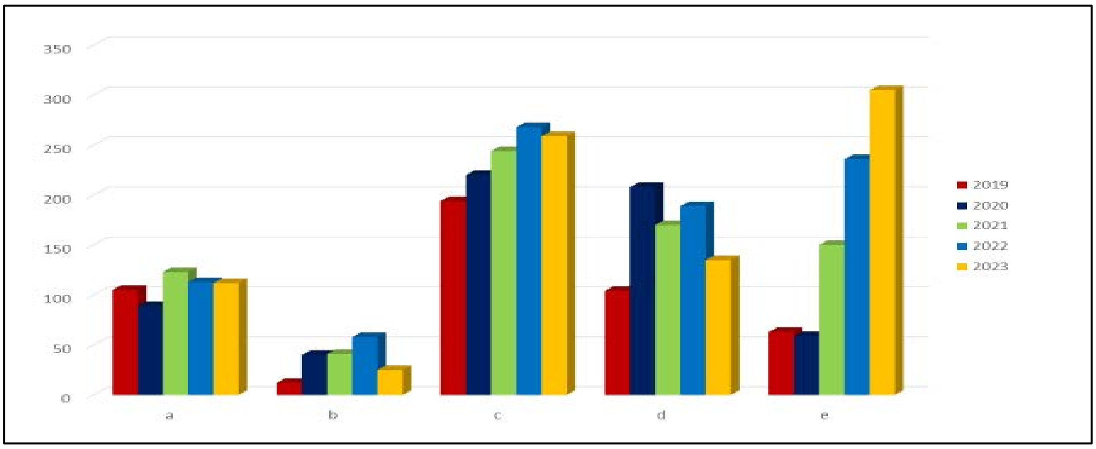
Figure 3: Number of proponents per cluster (2019-2023)



Source: Edufin Commission, FEM, 2019-2023

An examination of the number of initiatives per type of proponent (Figure 4) highlights the overwhelming role of cluster (e). In 2023, the number of events launched by the Edufin Committee and other organisations in this cluster reached 305, thereby pointing to the cluster's rapidly growing role.

Figure 4: Number of initiatives developed by each cluster (2019-2023)



Source: Edufin Commission, FEM, 2019-2023

Given the number of initiatives, cluster (c) is also highly relevant over the focal period, especially in 2022. In this case, the growing number of initiatives was sustained by an increase in the number of institutions offering financial education to Italian citizens in October.

In sum, positive growth in Italian initiatives is evident. However, as outlined previously, essential areas for such a mapping should include other aspects, such as methodology, programme design, scope, target audience, outreach, segmentation (e.g., urban, rural, age and gender), geographical coverage, delivery channels and their effectiveness, and the results of impact assessments. This will allow for the further improvement of financial education.

5. Conclusion

This article used marketing and economics as intertwined methodological tools to offer a general analysis in which financial education is the outcome of both market and state forces. We then applied the framework to the experience in Italy, where private and public players have proposed financial-education initiatives, and the government has been active in this field since 2018. Overall, this article points to policy considerations regarding the role of private firms on the one hand and political institutions on the other. On both sides, a common conclusion emerges – all else equal, starting with the skills and resources needed to address the uncharted waters of a continuously evolving financial world, independence is a necessary condition for ensuring the suitable production of financial education.

Private firms and financial-service providers are extremely vital in providing financial awareness and education to potential consumers. The analysis presented in the previous section suggests that their involvement in financial education is likely one factor that increased financial literacy in Italy. However, Italy's ranking in the sample of advanced economies is still relatively low (Di Salvatore et al. 2018, D'Alessio et al. 2021, European Commission 2023, Lamboglia et al. 2023). Therefore, additional efforts are required.

More, due to their origin as financial service provider or to the efficient use of marketing techniques by private firms, their involvement in financial education has potentially harm consequences on policy requirements, that should be recognized and avoided. The exclusion of priority targets and the consequent mismatches between public and private aims, the absence of universal, standardized quality assessment grids and metrics and the complex interrelations between trust in the educator, in its offerings, in the financial industry and the institutions offer a wide range of further reflections.

On the political side, politicians around the world have introduced financial-education policies in recent years. However, such policies have been highly heterogeneous. To capture the general drivers of this heterogeneity, this paper uses the literature on political economy and behavioural economics. We applied a general setup of government choices in addressing a scarce public resource to the association between the financial-literacy endowment and financial-education policies. This approach highlighted the motivations that help explain why the government in charge is more or less active in pursuing such policies.

Given this general framework, a specific result emerged from our analysis: all else equal (i.e., the list of factors mentioned in our discussion of the role of private firms), we can identify a possible role for a public certifier. Moreover, we showed that certification quality is associated with the independence of the public agency, given the risks to be captured by the private constituencies that are explicitly or implicitly against financial literacy, or by the politicians who would like to please those constituencies. Independence becomes the metaphorical stone that gently and positively affects both private and public interests.

Future research may test the robustness of the two pillars that serve as the foundations of the analysis presented here. The first pillar is the positive relationships among trust, financial literacy and financial education. The second is the financial-education activism that may characterise incumbent governments.

With regard to the first pillar, the most interesting challenge is to identify causality using experimental devices that have already demonstrated their effectiveness in investigations of disclosure (Wulf and Seizov 2022) and financial literacy (Billari et al. 2023). Given the importance of trust as a driver of financial education and literacy, the complex relations between narrow-scope and broad-scope trust should be researched further.

Previous studies have shown that service offerings (i.e., their effectiveness and procedures) affect institutional trust (e.g., Van Ryzin 2007, 2011, Vigoda-Gadot and Yuval 2003). In addition, fundamental contributions to this debate show that the organisation of service delivery is an important factor in modifying experiences of trust. In other words, some aspects of the financial-education service experience may be more impactful as drivers of provider and institutional trust. The positioning of the access points might also affect the impact of other factors, such fairness, participation and coproduction, that may shape the service experience and affect trust in public institutions, (Berg and Dahl 2019, Fladderus et al. 2014, Osborne et al. 2013, Van Ryzin 2011). Thus, future research should further explore this issue (Berg and Johansson 2020). Finally, our discussion of needs' elicitation and quality assessments of financial-education offerings showed that institutional trust is influenced by both the quality of the agent and the quality of the offerings. This means that brand identity and purpose may play roles as proxies of trust in *ex ante* evaluations. Thus, how brand trust influences consumer confidence in credence goods requires additional research.

With respect to the second pillar, previous research on financial literacy has failed to investigate the preferences of the main public actors (i.e., the politicians). This gap in the extant research is not without effects. Our limited understanding of the goals and incentives of the politicians in charge affects our knowledge of why financial-education policies can be more or less intense in a given country. This issue can be addressed through systematic examinations of politicians' voices that rely on text-analysis techniques (Ferrara et al. 2021) or elite surveys (Ferrara et al. 2023).

In sum, the combination of marketing and economics as intertwined methodological tools suggests that when planning and delivering financial-education programmes that suit pre-defined customer needs and are intended to measure specific outcomes, financial-sector authorities could employ marketing methodologies to ensure effectiveness and efficiency. Many methods can be employed to help financial-sector authorities chart customers' journeys and understand their financial-education needs (World Bank 2021). More specifically, customer-centric assessments that generate buyer personas and capture knowledge from various customer-facing employees in a range of organisations (e.g., banks, insurance companies, agents and so on) could help clarify consumers' needs at every point of interaction with specific products or services.

6. Appendix One: Politicians, Financial Education and Certification

Following Masciandaro 2023 – which is in turn a specific application of a general theoretical setting in which each government can influence the endowment of an exhaustible public resource (Harstad 2023) - consider financial trust as an endowment of a public resource that can be maintained or deteriorate. Opportunistic and illegal behaviours among financial producers can trigger trust deterioration. Time is discrete and has an infinite number of periods. At time t, the size of financial trust in a country and for a given population is S_t. The extent of financial-trust deterioration is x_t ε (0,1), where:

$$S_{t+1} = (1 - x_t)S_t. \qquad (1)$$

Given that the country is a democracy, all else equal, the elected government can view the protection of the trust endowment as its own mission and, therefore, be active in designing and implementing financial-education policies, that strength, other things being equal, financial literacy.

At the beginning of any period, the politicians in charge acknowledge the existence of uncertainty in the political game. The politicians in power decide on the extent of their financial-education activism, which will preserve the trust endowment that will be inherited by the next government. As we will see later, any activism decision carries both political benefits and costs. Therefore, the politicians in charge will discount the uncertainty of remaining in power.

Let us consider p ε (0,1) as the probability that these politicians will be in office in any later period. The lower this probability, the higher is the political competition. Assuming n identical politicians, parties, or coalitions in competition, we have:

$$p = \frac{1}{n}. \qquad (2)$$

We assume that the overall re-election probability is independent from financial-education performance, which seems to be a realistic hypothesis. At the same time, the politicians in charge know that their financial- education activism is associated with both political gains and political costs.

The politicians can implement financial- education policies that limit the deterioration of trust. However, doing so is not without cost given the existence of economic and political opportunity costs in designing and implementing these policies. Therefore, constituencies formally or *de facto* in favour of or against financial literacy can be present in the population.

Therefore, let us assume that the value of financial education for conserving financial trust is:

$$B = \frac{b}{(1-\partial)}. \qquad (3)$$

As the setting is dynamic, the lowercase letter is the pre-discounted value, while the uppercase letter is the present value, which includes the time-discount factor, where $0 < \partial < 1$. The more the politician is a myopic agent (i.e., the time discount factor is close to one), the higher the present values of the political benefits and costs will be.

Furthermore, let us assume that the value of financial education is:

$$B_1 > B_0 > 0;\ \Delta_b = B_1 - \ B_0 > 0, \tag{4}$$

where B_1 is the benefit for the politician in charge and B_0 is the benefit for a politician not in power, signalling that being in power matters for an individual. *Δ* is a metric measuring how the politician in charge benefits from actively in pursuing financial- education policies.

In order to build a complete political cost-benefit analysis, we must acknowledge that the politician in charge may benefit from financial- education inaction. Assume that inaction in financial- education policy automatically implies higher financial illiteracy and that the value of financial illiteracy is:

$$A_1 > A_0 > 0;\ \Delta_a = A_1 - \ A_0 > 0, \tag{5}$$

where A_1 is the benefit for the politician in charge and A_0 is the benefit for a politician not in power. *Δ* is a metric measuring how the politician in charge benefits from not pursuing financial- education policies. The benefits of political inaction can be motivated using two arguments: behavioural biases and capture.

In general, politicians prefer the status quo when loss aversion characterizes their goal functions. In such situations, inaction becomes the optimal economic-policy strategy. Loss-averse politicians are an extreme case of conservative players – "pigeons" – as they dislike any kind of active policy. In the behavioural literature, given the status quo, individuals perceive outcomes as gains or losses, and losses loom larger than gains.

Loss aversion has increasingly been viewed as relevant for explaining political behaviour. In our case, if the politicians in charge feel that activism in financial- education policy may have more political costs than benefits, they may view inaction as the optimal strategy given the scarce availability of public resources.

Moreover, politicians can view inaction as optimal if they are captured by financially illiterate constituencies. In other words, inaction in designing and implementing financial-education policies may be convenient for the politicians in charge.

In fact, constituencies in the same population may explicitly or implicitly view financial-education policies as useless or costly, or even view financial illiteracy as beneficial. To understand why some individuals may view inaction in financial-education policy as beneficial, we must acknowledge that financial illiteracy can increase the activities of unskilled, unfair or illegal actors. If we view any financial producers that gain from interacting with naïve citizens as unskilled/unfair actors, we know that these operators will favour higher levels of financial illiteracy. In parallel, some skilled consumers would like to live in a world characterized by high financial illiteracy, as this would facilitate fraudulent conduct in networks where the melding of technology and financial services is calibrated to accommodate citizens who, on average, are naïve.

If inaction in financial-education policy implies higher financial illiteracy, we can assume that the value of financial illiteracy is:

$$A_1 = \frac{a_1}{(1-\partial)}. \tag{6}$$

Again the lowercase letter is the initial pre-discounted value, while the uppercase letter is the present value that includes the myopia factor. Therefore, the more the politician in charge prefers the status quo and/or is captured, the more we can assume (regardless of the potential benefits of financial literacy) that:

$$A_0 > B. \qquad (7)$$

However, the politicians know that inaction in financial literacy is not cost-free, as financial instability is more likely. We assume that the financial-instability costs are associated with the level of inaction and with the endowment of financial trust:

$$\frac{c}{2}\, x_t^2 S_t. \qquad (8)$$

The intuition is straightforward – instability costs are associated with the financial-illiteracy level taking how relevant financial trust is for a given population into account. In turn, declines in trust can be associated with systemic financial crises, or individual crises. Moreover, with the constant evolution of financial technologies, consumers are increasingly falling victim to producers. Therefore, regardless of the possibility of a regulatory reaction, the risk of trust deterioration is likely to increase.

As we have considered potentially relevant drivers, we can determine the politician's goal function. In order to identify a policy benchmark, we can start from the helping-hand perspective. Let us describe the social planner's choice in terms of stationary equilibrium. In equilibrium, for the politician, the helping hand's expected value, V_{HH}, is associated with the socially optimal level of a given steady-state level of inaction, x_s, which is independent from the trust endowment:

$$V_{HH} \;=\frac{x_s A^* + (1-x_s)b - x_s^2\frac{c}{2}}{1-\partial(1-x_s)}, \qquad (9)$$

Where the social gain for inaction, A^*, is a weighted average of the expected gains for a politician (i.e., to be either in charge, A_1, or not in charge, A_0).

The corresponding inaction level, *x**, that optimizes the social expected value is minimized at a steady-state level $x_s = x^*$ can be either zero, or it can be positive depending on the expected costs and benefits, and given the politician's myopia:

$$x^* = \sqrt{\frac{(1-\partial)^2}{\partial^2} + 2\,\frac{(1-\partial)}{\partial}\frac{(A^* - B\,)}{c}} - \frac{1-\partial}{\partial}. \qquad (10)$$

However, the politicians in charge at any moment in time do not have the social planner's perspective. Instead, their grabbing-hand perspective implies that being part of the incumbent government matters for each of them. Consequently, it is possible to identify the optimal inaction, x_t, as well as its structural drivers.

In equilibrium, for the politician, the grabbing-hand expected value, V_{GH}, is associated with the potential gains of being in charge, all else equal:

$$V_{GH} \ = \frac{x_s A_1 + (1 - x_s)b - x_s^2 \frac{c}{2}}{1 - \partial(1 - x_s)} \tag{11}$$

and

$$x_t = \frac{\left(A_1 - b - \partial v_p\,(x_s)\right)}{c}. \tag{12}$$

Actual financial-education activism tends to be higher when the instability costs and the literacy gains are higher. The opposite is true with regard to the financial-illiteracy gains and the myopic factor (i.e., more myopic politicians care less about financial-literacy policy).

The inaction level, x_t, that optimizes the actual expected value of the politician in charge is minimized at a steady-state level, x_p, which can be either zero or positive depending on the expected costs and benefits. Given the politician's myopia:

$$x_p = \sqrt{\frac{(1-\partial)^2}{\partial^2} + 2\frac{(1-\partial)}{\partial}\frac{\left(A_p - B\ \right)}{c}} - \frac{1-\partial}{\partial}, \tag{13}$$

where optimization takes the political-competition factor into account:

$$A_p \equiv pA_1 - (1-p)A_0. \tag{14}$$

However, in contrast to the helping-hand strategy, the inaction strategy in the grabbing-hand scenario can be higher that the corresponding steady-state level if the political gain of being inactive is higher. In fact, when:

$$\Delta_a(1-p) > 0 \tag{15}$$

then:

$$x_t = x_s + \frac{(1-p)\Delta_a}{c}. \tag{16}$$

In other words, the politician's inaction will be higher when his or her gains are higher and when political competition is high. The opposite is true when the probability of financial instability is higher.

Given this overall analytical framework, what are the consequences of a public agency taking on a third-party certification role? In cases where the third-party certifier can be a public body, we can examine the conditions under which such an agency can perform its disclosure role. In particular, we can analyse a specific application of a general theoretical setting in which the professionals who are going to sell a credence good represent a supply that is relatively scarce, their quality is heterogeneous and users cannot perfectly distinguish between the skills of every seller (Berk and Van Binsbergen 2023).

Consider a population of agents, a fraction, *u*, where $u \in [0,1]$, of which would like to become users of financial education to improve their financial literacy. The more the financial literature is affected by obsolescence (Masciandaro 2023), the more the fraction of users will be closer to one. In this population, another fraction, σ, where $\sigma < 1$, are agents in the form of "high quality (HQ)" educators with skills that allow them to offer financial education. Each user must find an educator who will provide education.

When the demand for education is higher than the supply, the value of this service will be high relative to alternative activities. In such situation, users, who are unskilled agents, would like to become "low quality (LQ)" educators. These agents know that they do not have the skills to offer education, but they nevertheless do so in order to gain the value.

To capture the fact that relatively short supply characterises the financial-education market in the simplest way, we assume that any educator can serve only one user. Therefore, the fraction σ becomes the maximum share of the population that can earn a HQ education. Each user maximises her or his expected utility from education, and invests time and effort in the education experience.

In order to calculate the social value of financial education, we assume that the net expected utility discounts the value of the education service that any producer earns in supplying education. Therefore, we can call $F(x)$ the general cumulative consumer utility with its density function $f(x)$ and $E(u)$ the specific value that user u would like to invest in obtaining a financial education. The users are ordered based on their willingness to invest in education – all else equal, the higher the investment in terms of utility, the lower the willingness to invest. Any financial-education experience implies a value exchange between a user who invests and an educator that gains.

Here, two situations can arise. First, if the users can observe the quality of the educators, only σ HD educators will be active, LQ educators cannot exist by definition and σ users will be satisfied. Therefore, the gain of any educator will be $E(1-\sigma)$, and σ measures the number of consumers whose willingness to invest at least matches the value of the education: $E(u) \geq E(1-\sigma)$. The total social surplus, which measures the difference between the social value and the social investment in financial education, is equal to:

$$\int_{1-\sigma}^{1} E\,(x)dx - E(1-\sigma)\sigma \geq 0 \qquad (17)$$

At the same time, the lower the supply of HQ educators in this situation, the lower the number of satisfied users and the consumer surplus will be.

Second, if the quality of the educators is unknown, the utility of a public agency that acts as certifier plays a role. The public certifier develops a certification test, which acts as a signal for the users. At the same time, the certifier's information set is imperfect. Therefore, the HQ educators will pass the certification test with a probability of *q*, the LQ educators will pass with a probability of *p*, and $0 \ll p < q \ll 1$.

Then, the certifier's goal becomes evident – the more its certification test increases q and/or decreases p, the better the quality certification will be and the more likely the production of the socially optimal financial education will become. The problem is that, in developing the certification test, the certifier must address a trade-off: on the one hand, higher certification standards can increase the benefits of reducing the number of LQ educators while, on the other hand, such standards can penalise HQ educators. The certifier would avoid both false positives (i.e., LQ educators pass the certification test) and false negatives (i.e., HQ educators fail the certification test).

7. References

AFI, 2021, National Financial Education Strategies Toolkit, https://www.afi-global.org/wp-content/uploads/2021/07/NFES_toolkit_22082022.pdf

Agasisti T., Barucci E., Cannistrà M., Marazzina D. and M. Soncin, 2023, Online or On-Campus? The Effects of Financial Education on Student Knowledge Gain, *Evaluation and Program Planning*, 98, 102273.

Alarcon G. M., Lyons J. B., Christensen J. C., Klosterman S. L., Bowers M. A., Ryan T. J., Jessup S. A. and K.T. Wynne, 2017, The Effect of Propensity to Trust and Perceptions of Trustworthiness on trust Behaviors in Dyads, *Behavior Research Methods*, 50(5), 1906–1920.

Albano G. and A. Lizzeri, 2001, Strategic Certification and the Provision of Quality, *International Economic Review,* 42(1), 267-283.

Alesina A. and F. Passarelli, 2019, Loss Aversion in Politics, *American Journal of Political Science*, 63(4), 936-947.

Alsemgeest L., 2015, Arguments for and against Financial Literacy Education: .

Where to Go from Here?, *International Journal of Consumer Studies*, 39, 155-161.

Aman H., Motonishi T., Ogawa K. and K. Omori, 2024, The Effects of Financial Literacy on Long-Term Recognition and Short-Term Trade in Mutual Funds: Evidence from Japan, *International Review of Economics and Finance*, 89, 762-783.

Anagol S., Cole S. and S. Sarkar, 2017, Understanding the Advice of Commissions-Motivated Agents: Evidence from Insurance Market, *Review of Economics and Statistics*, 99(1), 1-15.

Aprea C., Schultheis J. and S. Stolle, 2018, *Instructional Integration of Digital Learning Games in Financial Literacy Education*, in A. Lucey & K.S. Cooter (Eds.), Financial Literacy for Children and Youth (2nd ed.). Frankfurt/M.

Atkinson A. and F. Messy, 2013, *Promoting Financial Inclusion through Financial Education: OECD/INFE Evidence, Policies and Practice*, OECD Working Papers on Finance, Insurance and Private Pensions, No. 34, OECD Publishing.

Bachmann R., 2018, Institutions and Trust, in R. Searle, A.-M. Nienaber, and S. B. Sitkin (Eds.), *The Routledge Companion to Trust*, Routledge, 218–228.

Bakos Y., Marotta-Wurgler F. and D.R. Trossen, 2014, Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts, *Journal of Legal Studies*, 43(1), 1-35.

Balafoutas L. and R. Kerschbamer, 2020, Credence Goods in the Literature: What the Past Fifteen Years have Thought Us about Fraud, Incentives, and the Role of Institutions, *Journal of Behavioural and Experimental Finance*, 26, 100285.

Bank for International Settlements (Bis), 2014, *Financial Education Programs and Strategies Approaches and Available Resources*, 108104-BRI-FinancialEducationProgramsandStrategies-PUBLIC.pdf

Bank for International Settlements (Bis), 2021, *FinTech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policies*, Bis Working Papers, 117.

Barone R. and D. Masciandaro, 2019, Cryptocurrency or Usury? Crime and Alternative Money Laundering Techniques, *European Journal of Law and Economics*, 47, 233-254.

Beaver W., Shakespeare C. and M. Soliman, 2006, Differential Properties in the Ratings of Certified vs. Non-Certified Bond Rating Agencies, *Journal of Accounting and Economics*, 42(3), 303-334.

Benabou R. and G. Laroque, 1992, Using Privileged Information to Manipulate Markets: Insiders, Gurus, and Credibility, *Quarterly Journal of Economics*, 107(3), 921-958.

Ben-Shahar O. and C. Schneider, 2014, *More than You Wanted to Know: The Failure of Mandated Disclosure*, Princeton University, Princeton.

Berejikian J., 1997, The Gains Debate: Framing State Choice, *American Political Science Review*, 91(4), 789-805.

Berg M. and T. Johansson, 2020, *Building Institutional Trust Through Service Experiences—Private Versus Public Provision Matter, Journal of Public Administration Research and Theory*, 30(2), 290–306.

Berg M. and V. Dahl, 2019, Mechanisms of Trust for Different Modes of Welfare Service Provision, *Public Management Review*, (1/22).

Berry L., 2000, Cultivating Service Brand Equity, *Journal of the Academy of Marketing Science*, 28(1), 128-137.

Bester H. and M. Dahm, 2018, Credence Goods, Costly Diagnosis and Subjective Evaluation, *Economic Journal*, 611, 1367-1394.

Berk B.J. and J.H. van Binsbergen, 2022, Regulation of Charlatans in High-Skill Professions, *Journal of Finance*, 77(2), 1219-1258.

Berk M. and Johansson- Berg T., Building Institutional Trust Through Service Experiences - Private Versus Public Provision Matter, 2019, *Journal of Public Administration Research and Theory*, October, 57.

Bian B., Pagel M. and H. Tang, 2023, *Consumer Surveillance and Financial Fraud*, NBER Working Paper Series, n.31692.

Billari F.C., Favero C.A. and F. Saita, 2023, Online Financial and Demographic Education for Workers: Experimental Evidence from an Italian Pension Fund, *Journal of Banking and Finance*, 106849.

Bitner M.J., 1992, Servicescape: The Impact of Physical Surroundings on Customers and Employees, *The Journal of Marketing*, 56(2), 57-71.

Boeri T. and L. Guiso, 2008, The Subprime Crisis: Greenspan's Legacy, in A. Felton and C. Reinart, (Eds), *The First Global Financial Crisis of the 21st Century*, Part 1: August 2007-May 2008, CEPR, London,37-40.

Bolton P., Freixas X. and J. Shapiro, 2009, *The Credit Ratings Game*, NBER Working Paper Series, n. 14712.

Bormann I., Niedlich S. and I. Wuerb , 2021, Trust in Educational Settings—What It Is and Why It Matters. European Perspectives*, European Education*, 53(3/4), 121–136.

Calcagno R. and C. Monticone, 2015, Financial Literacy and the Demand for Financial Advice, *Journal of Banking and Finance*, 50, 363–380.

Clarke C., 2015, Learning to Fail: Resilience and the Empty Promise of Financial Literacy Education, *Consumption, Markets and Culture*, 18(3), 257-276.

Colquitt J.A., Scott B.A. and J.A. Lepine, 2007, Trust, Trustworthiness, and Trust Propensity: A Meta-Analytic Test of Their Unique Relationships with Risk Taking and Job Performance, *Journal of Applied Psychology*, 92(4), 909-927.

D'Alessio G., De Bonis R., Neri, A., and C. Rampazzi, 2021, Financial Literacy in Italy: The Results of the Bank of Italy's 2020 survey, *Politica Economica*, 37(2), 215-252.

Deuflhard F., Georgarakos D. and R. Inderst, 2019, Financial Literacy and Saving Account Returns, *Journal of the European Economic Association*, 17(1), 131-164.

Di Salvatore, A., Franceschi, F., Neri, A., & Zanichelli, F., 2018, *Measuring the Financial Literacy of the Adult Population: the Experience of Banca d'Italia*, Bank of Italy, Occasional Papers, n.435.

Dranove D. and G. Zhe Jin, 2010, *Quality Disclosure And Certification: Theory And Practice*, NBER Working Paper Series, n.15644.

Druckman J.N. and A. Lupia, 2000, Preference Formation, *Annual Review of Political Science*, 3, 1-24.

Dulleck U., Gong J. and J. Li, 2013, Contracting for Infrastructure Projects as Credence Goods, *Journal of Public Economics Theory*, 17 (3), 328–345.

Dulleck U., Kerschbamer R. and M. Sutter, 2011, The Economics of Credence Goods: An Experiment on the Role of Liability, Verifiability, Reputation, and Competition, *American Economic Review*, 101, 526-555.

Dulleck U. and R. Kerschbamer, 2006, On Doctors, Mechanics, and Computer Specialists: The Economics of Credence Goods, *Journal of Economic Literature*, 44(1), 5-42.

Dulleck U. and B.U. Wigger, 2015, Politicians as Experts, Electoral Control, and Fiscal Restraints, *Journal of Public Economics*, 121, 106–116.

European Banking Authority (Eba), 2020, *Eba Report on Financial Education 2019-2020*.

European Commission, Flash Eurobarometer 525, 2023, *Monitoring the Level of Financial Literacy in the EU, Country Factsheet: Italy*, Report, Brussels.

European Supervisory Authorities (Esas), 2023, *Joint Committee of the European Supervisory Authorities, Thematic Report on National Financial Education Initiatives on Digitalization*.

Farhi E., Lerner J. and J. Tirole, 2008, *Fear Rejection? Tiered Certification and Transparency*, NBER Working Paper Series, n. 14457.

Favaretto F. and D. Masciandaro, 2016, Doves, Hawks and Pigeons: Behavioural Monetary Policy and Interest Rate Inertia, *Journal of Financial Stability*, 27, 50-58.

Ferrara F., Masciandaro D., Moschella M. and D. Romelli, 2021, Political Voice on Monetary Policy: Evidence from the Parliamentary Hearings of the European Central Bank, *European Journal of Political Economy*, 72, 102143, 2021.

Ferrara F., Masciandaro D., Moschella M. and D. Romelli, 2023, *What Do Politicians Think of Technocratic Institutions? Experimental Evidence on the European Central Bank*, Bocconi Baffi Centre, Working Paper Series, n. 201.

Fledderus J., Brandsen T. and M.E. Honingh, 2015, User Co-production of Public Service Delivery: An Uncertainty Approach, *Public Policy and Administration*, 30(2), 145-164.

Flegm E., 2005, Accounting at a Crossroad, *CPA Journal,* 75(12), 16-22.

Frisell L., Roszbach K. and G. Spagnolo, 2008, *Governing the Governors: A Clinical Study of Central Banks*, CEPR Discussion Papers, n. 6888.

Furth-Matzkin M., 2017, On the Unexpected Use of Unenforceable Contract Terms: Evidence from the Residential Rental Market, *Journal of Legal Analysis*, 9(1), 1-49.

Gemmo I., Michaud P.C. and O.S. Mitchell, 2023, *Selection into Financial Education and Effects on Portfolio Choice*, NBER Working Paper Series, n.31682.

Gerrans P., Hoffmann A.O., McNair S.J. and J.I. Pallant, 2023, *More Than Objective Knowledge: Exploring Heterogeneity in Consumer Response to a Financial Education Initiative Across Multiple Domains of Financial Literacy*, mimeograph.

Goedkoop F., Mangan M., Mastrogiacomo M. and S. Hochguertel, 2023, *Trust in the Financial Performance of Pension Funds, Public Perception, and its Effects on Participation in Voluntary Pension Saving Plans*, De Nederlandsche Bank, Working Paper Series, n.783.

Glazer J., McGuire T., Cao Z. and A. Zaslavsky, 2008, Using Global Ratings of Health Plans to Improve the Quality of Health Care, *Journal of Health Economics*, 27(5), 1182-1195.

Gottschalk F., 2018, *What Characterizes Credence Goods? A Critical Look at the Literature*, mimeo.

Goyal K. and S. Kumar, 2021, Financial Literacy: A Systematic Review and Bibliometric Analysis, *International Journal of Consumer Studies*, 45, 80-105.

Griffin J.M., Kruger S. and P. Mahajan, 2023, Did FinTech Lenders Facilitate PPP Fraud?, *Journal of Finance*, 78(3), 1777-1827.

Grossman S.J., 1981, The Information Role of Warranties and Private Disclosure about Product Quality, *Journal of Law and Economics*, 24(3), 461-483.

Guiso L., 2010, *A Trust-Driven Financial Crisis: Implications for the Future of Financial Markets*, EUI Working Paper Series, n. 7.

Guiso L. and T. Japelli, 2009, *Financial Literacy and Portfolio Diversification*, CSEF Working Papers, n.212.

Guiso L. and E. Viviano, 2015, How Much Can Financial Literacy Help?, *Review of Finance*, 19, 1347-1382.

Hansen T., 2012, Understanding Trust in Financial Services: The Influence of Financial Healthiness, Knowledge, and Satisfaction, *Journal of Service Research*, 15(3), 280-295.

Harstad B., 2023, The Conservation Multiplier, *Journal of Political Economy*, 131 (7), 1731-1771.

Hastings J.S., Madrian B.C. and W. L. Skimmyhorn, 2013, Financial Literacy, Financial Education, and Economic Outcomes, *Annual Review of Economics*, 5, 347-373.

Hvide H. and A. Heifetz, 2001, *Free-Entry Equilibrium in a Market for Certifiers*, Norwegian School of Economics, Working Paper Series, May, 25

Hongxia L., Dogan G. and M. Zhang, 2020, Impact of Customer-to-Customer Interactions on Overall Service Experience: A Social Servicescape Perspective, *International Journal of Hospitality Management*, 87, 102376.

Jaffer S., Morris N. and D. Vines, 2014, Why Trustworthiness is important, in N. Morris and D. Vines, (Eds.), *Capital Failure: Rebuilding Trust in Financial Services*, Oxford University Press, Oxford.

Jansen B. J. and S. Schuster, 2011, Bidding on the Buying Funnel for Sponsored Search and Keyword Advertising, *Journal of Electronic Commerce Research*, 12(1), 1-18.

Kadens E., 2023, *The Persistent Limits of Fraud Prevention in Historical Perspective*, Northwestern University Law Review, 118(1), 167-192.

Kahneman D. and A. Tversky, 1988, Rational Choice and the Framing of Decisions, in D.E. Bell, H. Raiffa and A. Tversky, (Eds.), Decision Making: Descriptive, Normative, and Prescriptive Interactions, Cambridge University Press, Cambridge, 167-192.

Kleiner M.M., 2000, Occupational Licencing, *Journal of Economic Perspectives*, 14, 189-202.

Kleiner M.M. and A.B. Krueger, 2013, Analysing the Extent and Influence of Occupational Licencing on the Labor Market, *Journal of Labor Economics*, 31, 173-202.

Inderst R. and M. Ottaviani, 2012a, Competition Through Commissions and Kickbacks, *American Economic Review*, 102 (2), 780–809.

Inderst R. and M. Ottaviani, 2012b, Financial Advice, *Journal of Economic Literature*, 50(2), 494–512.

Inderst R. and M. Ottaviani, 2012c, How (not) to Pay for Advice: A Framework for Consumer Financial Protection, *Journal of Financial Economics*, 105(2), 393–411.

IOSCO - OECD, 2018, *The Application of Behavioural Insights to Financial Literacy and Investor Education Programmes and Initiatives*, mimeograph.

Lamboglia S., Marinucci M., Stacchini M. and P. Vassallo, 2023, *Indagini sull'Alfabetizzazione Finanziaria e le Competenze di Finanza Digitale in Italia: Adulti*, Banca d'Italia, Statistiche, Roma.

Lawless K.A., Brown S.W. and Cartter, M., 1997, Applying Educational Psychology and Instructional Technology to Health Care Issues: Combating Lyme disease, International Journal of Instructional Media, 24(2), 287-297.

Lewis E. S. E., 1908, *Financial Advertising*, Indianapolis, Levey Brothers.

Lepsius, M. R., 2017, Trust in Institutions. In M. R. Lepsius and C. Wendt (Eds.), *Max Weber and Institutional Theory*, 79–87, Springer.

Lin H., Gursoy D. and M. Zhang, 2020, Impact of Customer-to-Customer Interactions on Overall Service Experience: A Social Servicescape *Perspective, International Journal of Hospitality Management*, 87, 102376.

Lizzeri A., 1999, Information Revelation and Certification Intermediaries, *RAND Journal of Economics,* 30(2), 214-231.

Loewenstein G. and Z. Wojtowicz, 2023, *The Economics of Attention*, CESIFO Working Papers, n. 10712.

Lührmann M., Serra-Garcia M. and J. Winter, 2015, Teaching Teenagers in Finance: Does it Work?, *Journal of Banking and Finance*, 54, 160-174.

Lumineau F. and O. Schilke, 2018, Trust Development across Levels of Analysis: An Embedded-Agency Perspective, *Journal of Trust Research*, 8(2), 238–248.

Lusardi A. Mitchell O.S., 2014, The Economic Importance of Financial Literacy: Theory and Evidence*, Journal Of Economic Literature*, 52(1), 5-44.

Lusardi A., 2019, Financial Literacy and the Need for Financial Education: Evidence and Implications*, Swiss Journal of Economics and Statistics*, 155(1), 10.1186.

Lusardi A. and O.S. Mitchell, 2023, The Importance of Financial Literacy: Opening a New Field, *Journal of Economic Perspectives*, 37(4), 137-154.

Mak V., 2012, The Myth of the "Empowered Consumer": Lessons from Financial Literacy Studies, *Journal of European Enterprise and Consumer Law*, 1(4), 254-263.

Manea N. and M. Purcaru, 2017*,* Mapping Educational Marketing, *Procedia of Economics and Business Administration*, https://doi.org/10.26458/v4.i1.30.

Masciandaro D., 2023*, Politicians, Trust, Financial Literacy and Financial Education: When Do They Care?*, Bocconi University, Baffi Centre Working Paper Series, n.208.

Mathis J., Mc Andrews J. and J. Rochet, 2009, Rating the Raters: Are Reputation Concerns Powerful Enough to Discipline Rating Agencies?, *Journal of Monetary Economics*, 56(5), 657-674.

McMahon M. and M. Naylor, 2023, Getting Through: Communicating Complex Information, Bank of England, Staff Working Papers, n. 1047.

Mercer J., 2005, Prospect Theory and Political Science, *Annual Review of Political Science*, 8, 1-21.

Miao C., 2009, Competition in Quality Standards, *Journal of Industrial Economics*, 57, 1-21.

Miller N., Resnick P. and R. Zechhauser, 2005, Eliciting Information Feedback: The Peer-Prediction Method, *Management Science,* 51(9),1359-1373.

Miller M., 2013, *Financial Education: What Works and What Doesn't?*, November, available at https://blogs.worldbank.org/psd/financial-education-what-works-and-what-doesn-t.

Mohta A. and V. Shunmugasundaram, 2023, Millennials' Financial Literacy and Risk Behavior: Evidence from India, *International Review of Economics*, 70, 419-435.

Morris T., Maillet S. and V. Koffi, 2022*,* Financial Knowledge, Financial Confidence and Learning Capacity on financial Behavior: a Canadian Study*, Cogent Social Sciences*, 8, 1996919.

Nikolova N., Möllering G. and M. Reihlen, 2015, Trusting as a 'Leap of Faith': Trust-Building Practices in Client–Consultant Relationships, *Scandinavian Journal of Management,* 31(2), 232–245.

OECD, 2022, *Guidance on Digital Delivery of Financial Education*.

OECD, 2018, *Policy Guidance on Digitalization and Financial Literacy*.

Oehler A., Horn M., Wendt S., Reish L.A. and T.J. Walker, 2018, Young Adults and Their Finances: An International Comparative Study on Applied Financial Literacy, *Economic Notes*, 47(2/3), 305-330.

Ottaviani M. and P. Sorensen, 2006, Professional Advice, *Journal of Economic Theory*, 126(1), 120-142.

Pacheco C., García I. and M. Reyes, 2018, Requirements Elicitation Techniques: a Systematic Literature Review based on the Maturity of the techniques, *ET Software*, 12(4), 365-378.

Parasuraman A., Berry L.L. and Zeithaml V.A., 1991, Refinement and Reassessment of the SERVQUAL scale, *Journal of Retailing,* 67(4), 420-450.

Pigou, A., 1938, *The Economics of Welfare*, Macmillan & Co., London.

Pollack I., 2005, A Typology of Communicative Strategies in Online Privacy Policies: Ethics, Power and Informed Consent, *Journal of Business Ethics*, 62(3), 221-235.

Quattrone G. and A. Tversky, 1988, Contrasting Rational and Psychological Analyses of Political Choices, *American Political Science Review*, 82, 719-736.

Rao H., 1994, The Social Construction of Reputation: Certification Contests, Legitimation, and the Survival of Organizations in the American Automobile Industry: 1895-1912, *Strategic Management Journal*, 29-44.

Romelli D., 2022, The Political Economy of Reforms in Central Bank Design: Evidence from a New Dataset, *Economic Policy*, 37(112), 641-688.

Ronson J., Farkuhar J.D., 2014, A Brave New World: Branding in Financial Services, in T. Harrison and H. Estelami, (Eds.), *Routledge Companion To Financial Services Marketing*, Routledge, London.

Sanders G. and S. Boivie, 2004, Sorting Things Out: Valuation of New Firms in Uncertain Markets, Strategic Management Journal, 25, 167-186.

Sapienza P. and L. Zingales, 2012, A Trust Crisis, *International Review of Finance*, 12(2), 123-131.

Scharfstein D. and J. Stein, 1990, Herding Behaviour and Investment, *American Economic Review*, 80(3), 465-479.

Scheffer L., Loewen P.J., Soroka S., Walgrave S. and T. Sheafer, 2018, Nonrepresentative Representatives: An Experimental Study of the Decision Making of Elected Politicians, *American Political Science Review*, 112(2), 302-321.

Schulthaus J. and C. Aprea, 2021, Applying Insights from Behavioral Finance and Learning Theory in Designing a Financial Education Serious Game for Secondary School Students, in C. Aprea and D. Ifenthaler, (Eds.), *Game-based Learning Across the Disciplines,* Springer Cham, Switzerland.

Shleifer A. and R. Vishny, 1998, *The Grabbing Hand,* Harvard University Press, Cambridge Massachusetts.

Schrader P.G. and K.A. Lawless, 2004, The Knowledge, Attitudes, and Behaviors Approach how to Evaluate Performance and Learning in Complex Environments, *Performance Improvement*, 43(9), 8-15.

Sirdeshmukh D., Singh J. and B. Sabol, 2002, Consumer Trust, Value, and Loyalty in Relational Exchanges, *Journal of Marketing*, 66(1), 15-37.

Slovic P., 1993, Perceived Risk, Trust and Democracy, *Risk Analysis*, 6, 675-682.

Soroka S., 2014, *Negativity in Democratic Politics: Causes and Consequences,* Cambridge University Press, Cambridge UK.

Stensaker, B. and D'Andrea, V., 2007, Branding – The Why, What and How Phenomenon*,* in B. Stensaker and V. D'Andrea V. (Eds.), *Branding in Higher Education. Exploring an Emerging Phenomenon, EAIR Series Research, Policy and Practice in Higher Education*, The European, Amsterdam, 6-13.

Stigler G.J., 1971, *The Theory of Economic Regulation. The Citizens and the State*, Chicago University Press, Chicago.

Stolper O.A. and A. Walter, 2017, Financial Literacy, Financial Advice, and Financial Behavior, *Journal of Business Economics*, 87, 581-643.

Teja N., 2023, New SEC Cyber Security Rules Likened to Banks "Airing Dirty Laundry in Public", *Banking Risk and Regulation*, August, 15.

Tyler T. R., 2006, Legitimacy and Legitimation, *Annual Review of Psychology*, 57, 375– 400

Taylor-Gooby P. and A. Wallace, 2009, Public Values and Public Trust: Responses to Welfare State Reform, *Journal of Social Policy*, 38 (3), 401-419.

Unesco, 2023, *Quality and Learning Indicators*, IIEP Learning Portal, mimeograph.

Uthaileang W. and S. Kiattisin, 2023, Developing the Capability of Digital Financial Literacy in Developing Countries: A Case of Online Loan for Small Entrepreneurs, *HELIYON*, https://doi.org/10.1016/j.heliyon.2023.e21961

Van der Cruijsen C., de Haan J. and D.J. Jansen, 2016, Trust and Financial Crisis Experiences, *Social Indicators Research*, 127(2), 577-600.

Van der Cruijsen C., de Haan J. and R. Roerink, 2021a, Financial Knowledge and Trust in Financial Institutions, *Journal of Consumer Affairs*, 55(2), 680-714.

Van der Cruijsen C., de Haan J. and R. Roerink, 2021b, Trust in Financial Institutions: A Survey, *Journal of Economic Surveys*, 10.1111

Van Esterik – Plasmeijer P.W.J. and W.F. van Raaij, 2017, Banking System Trust, Bank Trust, and Bank Loyalty, *International Journal of Bank Marketing*, 35(1), 97-111.

Van Ryzin G. G., 2011, Outcomes, Process, and Trust of Civil Servants, *Journal of Public Administration Research and Theory, (*21), 745–760.

Van Rooij M., Lusardi A. and R. Alessie, 2011, Financial Literacy and Stock Market Participation, *Journal of Financial Economics*, 101(2), 449-472.

Van Ryzin G., Muzzio D., Immerwahr S., Gulick L. and E. Martinez, 2004, Drivers and Consequences of Citizen Satisfaction: An Application of the American Customer Satisfaction Index Model to New York City, *Public Administration Review*, 64(3), 331-341.

Vigoda-Gadot and F. Yuval, 2003, Managerial Quality, Administrative Performance and Trust in Governance Revisited: A Follow-up Study of Causality, *International Journal of Public Sector Management*, 16(7), 502-522.

Von Gaudecker H.V., 2015, How Does Household Portfolio Diversification Vary with Financial Literacy and Financial Advice?: Financial Literacy and Household Portfolio Diversification*, Journal of Finance*, 70, 489–507.

Wade J.B., Porac J.F., Pollock T.G. and S.D. Graffin, 2006, The Burden of Celebrity: The Impact of Ceo Certification Contests on Ceo Pay and Performance, Academy of Management Journal, 46(4), 643-660.

Wilkinson-Ryan T., 2017, The Perverse Consequences of Disclosing Standard Terms, *Cornell Law Review*, 103(1), 117-175.

Willis L.E., 2011, The Financial Education Fallacy, *American Economic Review*, 101(3), 429-434.

World Bank*,* 2014*, Financial education programs and strategies: approaches and available resources,* Washington D.C.

World Bank, 2021, *Building a Financial Education Approach A Starting Point for Financial Sector Authorities*, Financial Inclusion Support Framework, available at https://openknowledge.worldbank.org/server/api/core/bitstreams/ba4aa1f7-c7b8-5177-a1c3-75f7e6df15a1/content.

World Economic Forum, 2022, *New study finds financial education gaps are primary barrier to retail investing in capital markets,* available at https://www.weforum.org/press/2022/08/new-study-finds-financial-education-gaps-are-primary-barrier-to-retail-investing-in-capital-markets/, published 4 August 2022

Wulf A.J. and O. Seizov, 2022, How to Improve Consumers' Understanding of Online Legal Information: Insights from a Behavioural Experiment, *European Journal of Law and Economics*, 10.1007.

Zucker L.G.,1986, Production of Trust: Institutional Sources of Economic Structure, *Research in Organizational Behavior*, 8, 53–111