EUROPEAN COMPANY LAW

Wolters Kluwer
Law & Business

European Company Law

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Published by:
Kluwer Law International
PO Box 316
2400 AH Alphen aan den Rijn
The Netherlands
Website: www.kluwerlaw.com

DISTRIBUTION

Sold and distributed in North, Central and South America by:
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Frederick MD 21704
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E-mail: customer.service@aspenpublishers.com

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European Company Law Journal is published six times per year. Subscription prices for 2014 including postage and handling:
Print subscription prices: EUR 676/USD 902/GBP 497
Online subscription prices: EUR 626/USD 836/GBP 461

Printed on acid free paper.

SHORT TITLE AND QUOTATION

ISSN: 1572-4999

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ARTICLE

Choice Architecture Matters: The Case of Investor Protection within the Italian Crowdfunding Market

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1 INTRODUCTION

The aim of this article is to offer a behaviourally informed evaluation of the novel Italian crowdfunding regulation, issued in 2013 by the Italian Financial Authority (hereinafter, 'Consob'). Over the past years, cognitive sciences have experimentally uncovered what biases affect consumers' (and investors') suboptimal decision-making process. Especially in the US, policymakers have shown growing interest in the insight offered by behavioural sciences in designing market regulations. From this perspective, the first step to be undertaken in developing a regulatory process is to unearth what misperceptions taint a consumption or investment decision. Except for the telecommunications domain, tools pertaining to the behavioural law and economics approach are rarely managed by Italian lawmakers in shaping market discipline.[1] To date, the Italian crowdfunding regulation, the only one fully enforced within the international legal framework, offers a great opportunity to behaviourally assess which features pertain to a truly backer-oriented statute. Since policymakers are always considered more as 'choice architects', it is worth investigating if the approach proposed by Consob allows backers to select investments that really meet their needs.[2] In order to do that, three main steps lead the research.

First, we map the biases that mostly affect the average Italian investor. To reach such a goal, we gleaned information from a survey recently carried out within the Italian financial market, which aimed at measuring what misperceptions influenced a mixed sample of 2,000 people made up of financial advisors and non-professional backers. Data were collected via website through an app specifically devised for the purpose and subsequently managed by a software program named 'Investimente.it'. The research has been promoted jointly by 'San Raffaele University – Cresa Research Centre' and 'Schroder Italia Investment', to enable investors to reveal their cognitive errors when managing financial transactions.

In the second step, we put under scrutiny the approach proposed by Consob for the crowdfunding industry. Such an approach is mainly based on duties of disclosure deemed helpful to crowdfunders in making conscious decisions, but it raises some critical questions: Is traditional mandatory disclosure still appropriate to face markets affected by asymmetric information? If it is, is the array of information to be disclosed by start-ups and portals properly selected by the law? Nowadays, it is common knowledge that the amount of information that each investor can process and recall is limited. For this reason, once the mandatory disclosure strategy is selected, policymakers should devote proper attention to what information/data they choose to publish.

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1 In the Italian mobile market, it has been adopted an advanced normative framework that originated from a novel regulatory approach named 'smart disclosure' (see sec. 3). In particular, one example of such a regulation is expressed by the 'Record, Evaluate and Compare Alternative Prices' (RECAP) model, stating that firms should disclose personal usage information to each consumer by means of electronic documents. In this way, consumers can easily download their usage information file from their provider's webpage. Users can then upload their electronic document to an independent 'comparative website' that will show them what prices are charged by different competitors, for the same product (or service) usage pattern. The Italian mobile regulation has enforced a RECAP model and consumers can benefit from this comparison tool, whose activity is supervised by the Italian Communication Authority (AGCoM). For a general description of RECAP model, see E. Kamenica et al., *Helping Consumers Know Themselves*, 101 Am. Econ. Rev. 417 ff (2011).

2 The expression 'choice architecture' traces back to a prominent US book, which describes the way in which decisions can be influenced by how options are proposed. See R.H. Thaler & C.R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* 11 ff (Penguin Books, 2009). In this regard, policymakers are 'choice architects' to the extent they select what data are to be disclosed and according to which format.

Brodi, Elisa & Motterlini, Matteo. 'Choice Architecture Matters: The Case of Investor Protection within the Italian Crowdfunding Market'. *European Company Law* 11, no. 5 (2014): 259–267.

Moreover, in order to be effectively processed by investors, information should be reported in a usable format. We analyse under a behavioural perspective what information portals and start-ups are forced to disclose and according to which format. We also detect what other safeguards are tailored for the crowdfunding market in order to protect backers' freedom of choice.

Lastly, in the third step, we discuss what amendments can be proposed to the current regulation, if any, to fine-tune it.

2 WHAT BIASES MOSTLY AFFECT INVESTORS?

Human judgment and decision making are often influenced by misperceptions stemming from cognitive errors. Yet, people are rarely aware of such misperceptions, usually denying their existence and consequently failing to correct them. In such a scenario, the role of a truly behavioural-oriented regulation is to help individuals to better understand their biases, explaining how to cope with them.

In this stage, attention is devoted to those misjudgments that usually prevent investors from fully understanding what risks can come from a financial transaction.[3] To reach this goal, we exploit a unique survey named 'Investimente.it' whose aim is to track and measure the main cognitive errors (and to correlate these with mood states and personality traits) occurring in the financial industry.[4] More than 2,100 contributors were asked to fill out a form designed to assess their vulnerability when making investment decisions. The dataset collects observations pertaining to a mixed sample of individuals, composed of financial advisors and non-professional investors. The survey allows us to capture a fairly accurate picture of the most relevant biases leading to make sub-optimal choices in the financial domain.

However, before mapping the misperceptions, two general premises should be drawn. First, a strong professional background (or expertise) does not in itself mean that individuals are able to make rational choices. Indeed, self-control plays a key role when making complex decisions – like financial ones – since it prevents emotion-driven choices. Second, an effective regulatory structure can reduce the imbalance that arises due to misperceptions, but it obviously cannot avoid them completely. Some biases are not possible to eliminate simply because they seem to be wired in our neurobiological characteristics (e.g., recent experiments have revealed a positive correlation between loss aversion and amygdala's grey matter volume).[5]

We can now turn to the Investimente.it survey, listing the eight most powerful misperceptions, highlighting which biases affect professionals and laymen with different magnitude:

(1) *Loss aversion.* Generally individuals do not equally weigh losses and gains. Empirical research has shown that the disutility generated by a loss of Euro (EUR) 100 must be compensated by a gain of at least EUR 225. On a general basis, losses loom larger than gains.

(2) *Optimism bias.* People are unrealistically optimistic about their decisions' outcome. Such attitudes lead investors to adopt a risk taking behaviour. In the financial domain, this misperception can push investors to select highly complex and risky products that do not match their needs or their portfolio strategy.

(3) *Overconfidence bias.* Closely related to the latter, it is a sort of optimism bias that leads people to put excessive trust in their ability to predict the future, driven by their personal judgment and beliefs. This error leads people to inaccurately predict the future, ignoring standard statistic and probability rules. It also prevents individuals from fully benefiting from a learning by doing process. According to the Investimente.it survey, professionals are more likely to suffer this bias than backers.

(4) *Disposition effect.* It is the tendency to sell stock too soon when share prices have increased, while keeping losing assets for too long. This occurs because people are generally willing to cash in profit (i.e., they are risk averse when facing with gains), but normally hesitate when it comes to a prospective loss (i.e., they are risk seeking when facing with losses). Curiously enough, professional advisors suffer more than non-professional investors from such a bias.

(5) *Status quo bias.* It describes the attitude to think of future scenarios as very similar to the current one. In the financial context, it leads investors to believe that when a positive market trend occurs the financial outlook will be equally positive.

(6) *Herd effect.* Sometimes prices of financial instruments are driven by investors' irrational behaviour. It occurs when backers start mimicking what other investors do. No reason pushes investors to follow the majority other than the desire to follow the herd. For this reason, this bias is the main cause of speculative bubbles.

(7) *Snake bite effect.* People tend to recall negative experiences more easily than positive ones. They behave in a way that will

3 Albeit the behavioural literature is reach of contributions on human misjudgments (see the milestone book of D. Kahneman & A. Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, Econometrica 47 (1979)), we decided to utilize the 'Investimente.it' data in order to precisely map and select the most relevant biases affecting the average Italian investor.

4 The research was done by Prof. Matteo Motterlini at the San Raffaele University of Milan (UniSR), Center for Experimental and Applied Epistemology and was funded by Schroder Investment Management. For further information, see www.investimente.it.

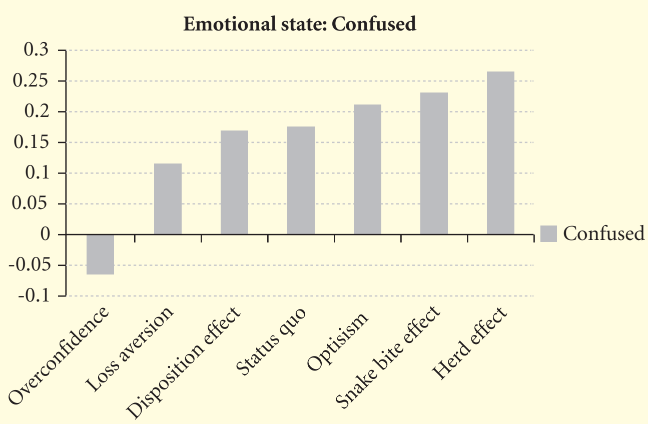
5 See N. Canessa et al., *The Functional and Structural Neural Basis of Individual Differences in Loss Aversion*, 33 The J. Neuroscience 14309 ff (2013).

protect them from re-experiencing such unpleasant situations. Yet, sometimes such choices are totally irrational and prevent individuals from making sound decisions.

(8) *Framing effect.* People' decisions can be strongly influenced by how options are proposed. Marketing experts are fully aware of this. But governmental bodies can also exploit such a bias in a pro-consumer way: by designing disclosure mandates in a format that promotes conscious decisions.

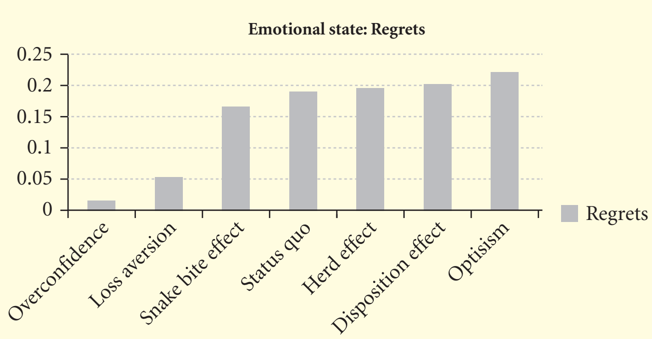
Lastly, consider that all the listed misperceptions interact with each other when investors decide to buy or not to buy a financial product and can also be exacerbated by specific mood states.[6] Indeed, the emotional state experienced by the chooser strongly affects the decisions' outcome, since it can heighten several biases at the same time. The following graphs refer to the correlations existing between some mood frequently experienced by individuals and the biases listed above (with the exception of the framing effect).

Graph 1 Correlation Emotional State - Biases



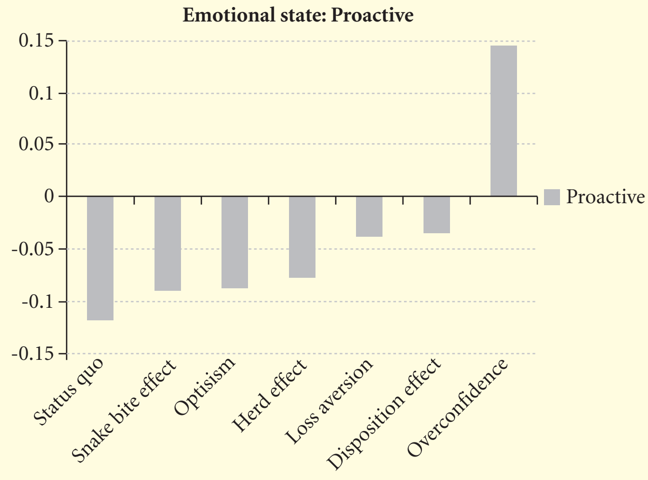
Source of data: Investimente.i

Graph 2 Correlation Emotional State – Biases



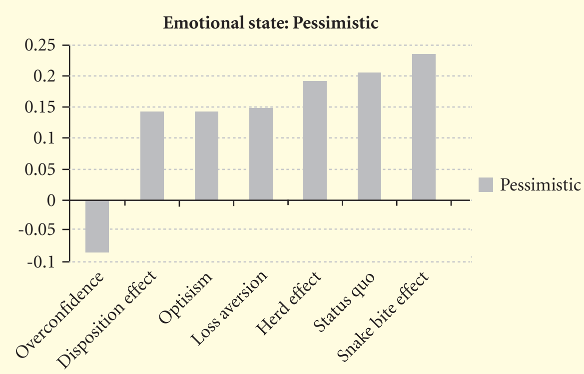
Source of data: Investimente.it

Graph 3 Correlation Emotional State – Biases



Source of data: Investimente.it

Graph 4 Correlation Emotional State – Biases



Source of data: Investimente.it

It is now possible to depict a fairly accurate picture of the relevant cognitive errors tainting the financial market and consequently the crowdfunding domain. Moving to the second stage of the research, the next paragraph analyses the strategy proposed by the Italian Financial Regulator.

3 THE NORMATIVE STRATEGY: SOME GENERAL REMARKS

Up-to-date approaches devised for regulating complex consumers markets have been proposed within the US legal system.[7] Policymakers have gradually shifted their attention from the information to be disclosed to the way such disclosure should take place (concerning to this point, consider the role generally played

6 As to the interrelation between decisions and mood states, see E.M. Caruso & E. Shafir, *Now That I Think about It, I'm in the Mood for Laughs: Decision Focused on Mood*, 19 J. Behavioral Decision Making 155 ff (2006); K.D. Vohs et al., *Do Emotions Help Or Hurt Decision Making?* (Russell Sage Foundation 2007).

7 See the U.S. Office of Information and Regulatory Affairs, *Informing Consumers through Smart Disclosure* (Memorandum for the Heads of Executive Departments and Agencies, issued on 8 Sep. 2011) (available at http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/informing-consumers-through-smart-disclosure.pdf).

by the framing effect described in section 2).[8] The process of integration between law, economics and psychology is at an advanced stage. Involving cognitive insight in the regulatory process has pushed several US governmental bodies to craft easy to manage disclosure formats.[9]

The last noteworthy result of such interdisciplinary cooperation is named 'smart disclosure', and it also utilizes the benefits coming from technical innovations. The underlying idea is to let software organize and aggregate relevant information, offering consumers an easy-to-understand format. As stated by Professor Cass Sunstein, former Administrator of the US Office of Information and Regulatory Affairs 'the term "smart disclosure" refers to the timely release of complex information and data in standardized, machine readable formats in ways that enable consumers to make informed decisions'.[10] In this regard, consider for example the 'Green Button' initiative, promoted by the US Government and according to which:

> electricity customers should be able to securely download their own easy-to-understand energy usage information from their utility or electricity supplier. Armed with this information, consumers can use a growing array of new web and smartphone tools to make more informed energy decisions, optimize the size and cost-effectiveness of solar panels for their home, or verify that energy-efficiency retrofit investments are performing as promised.[11]

To date, the 'smart disclosure' approach represents the most sophisticated path for drafting public regulation behaviourally oriented and it points the way forward. Taking it as a general benchmark, it is worth to turn back to the Italian crowdfunding regulation: the next step consists of testing if the same interdisciplinary effort has been made by the Italian Financial Authority.

3.1 Disclosure Mandates Drafted by the Italian Financial Regulator

The Italian crowdfunding regime is meant to help a specific group of firms – high tech start-ups – to raise capital. However, investors generally have a poor sense of the specific risks surroundings financial products, and this lack of knowledge is heightened when highly complex businesses, like those carried out by start-ups, ask for funding. The crowdfunding market poses a large asymmetric information problem, since there is a significant gap between the 'crowd', on one side, and the issuers, on the other. For this reason – albeit the current economic scenario challenges the efficient market hypothesis – mandatory disclosure is still a fundamental tool for regulating the market.[12] Yet, in order to be effective, disclosure should target only relevant information: too much data can create a sort of 'overload' effect that could impinge on the investor protection goal. Moreover, the regulatory authority has to pay specific attention to the way information is disclosed. Paragraphs 3.1.1 and 3.1.2 analyse the crowdfunding disclosure mandates,

8 The mandatory disclosure approach is still considered a cornerstone in the regulatory agenda: the recent financial crisis has just pushed scholars and policymakers to devise new ways to deliver information to the market. Although humans are boundedly rational agents (being unable to maximize their utility function), they still make decisions processing data and information at their disposal. Challenging the rational choice theory (and, consequently, the efficient market hypothesis), governmental bodies are always requested more to draft mandatory disclosure in a way easy to process for the average agent. There is a call for regulation based on real market conditions: knowing how humans make their judgments turns out to be vital for the regulation to be effective. Concerning the importance of socio-psychological factor in designing regulation, see C. Jolls et al., *A Behavioural Approach to Law and Economics*, 50 Stan. Law. Rev. 1471 ff (1998); C.R. Sunstein & R.H. Thaler, *Libertarian Paternalism Is Not an Oxymoron*, 70 U. Chi. L. Rev. 1159 ff (2003); C. Jolls, *Behavioural Law and Economics*, Yale Law School. Public Law Working Paper n. 130, freely available at www.ssrn.com; J.D. Wright, *Behavioral Law and Economics, Paternalism, and Consumer Contracts: an Empirical Perspective*, 2 NYU J. L. & Liberty 470 ff (2007). More specifically, on the need to shape a behaviourally informed disclosure regime, see C. Camerer et al., *Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism*, 1230 ff U. Pa. L. Rev. 151 (2003); R. Craswell, *Taking Information Seriously: Misrepresentation and Nondisclosure in Contract Law and Elsewhere*, 92 Va. L. Rev. 565 ff (2006); E. Avgouleas, *What Future for Disclosure as a Regulatory Technique? Lessons from the Global Financial Crisis and Beyond* 24 ff (2009): freely available at www.ssrn.com: 'What is really required is the adaptation of disclosure techniques, volume, format, and content to actual market conditions. Arguably, this means that disclosure regulation reform should be guided by empirical and experimental studies that measure the actual impact of disclosed information, and thus the effectiveness of disclosure rules'. On the opportunity to perform randomized control trials to test new public policies, see A. Alemanno & A. Spina, *Nudging Legally. On the Checks and Balances of Behavioural Regulation*, forthcoming Int'l J. Const. L. 12 (2014).

9 For a summary of such initiatives see R.H. Thaler & W. Tucker, *Smarter Information, Smarter Consumer*, 1 Harv. Bus. Rev. (online edition) 1ff (2013) (available at www.hbr.org).

10 See the US Office of Information and Regulatory Affairs, *Informing Consumers through Smart Disclosure* (Memorandum for the Heads of Executive Departments and Agencies, issued on 8 Sep. 2011): 2 ff (available at http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/informing-consumers-through-smart-disclosure.pdf).

11 The Green Button initiative is presented in detail at http://www.greenbuttondata.org/.

12 Under a general perspective, it is currently widely accepted that the economic theory of consumer choice rests a combination of both *normative* (how consumer *should* choose) and *positive* (how consumer *do* choose) theories (see, *ex multis*, R.H. Thaler, *Toward a Positive Theory of Consumer Choice*, in *Choices, Values, and Frames* 299 ff (Kahneman & Tversky ed., Cambridge U. Press 2000). For this reason, the 'efficient market hypothesis' along with the 'rational choice theory' (both normative theories) are still the foundation of the strategy adopted for regulating complex domains, like the financial one. It explains why the mandatory disclosure keep being regarded as a potent tool for protecting investors. However, over the past years, the financial crisis and the behavioural economic approach (i.e., a positive theory) have challenged the role played by the traditional duties of disclosure as to the investor protection goal. Yet, governmental bodies should reshape the mandatory disclosure exploiting the financial crisis lesson and making the information as much understandable as possible for the average investor (see, *ex multis*, E. Avgouleas, *What Future for Disclosure as a Regulatory Technique? Lessons from the Global Financial Crisis and Beyond* 24 ff (2009), (freely available at www.ssrn.com); S.M. Bainbridge, *Mandatory Disclosure: a Behavioral Analysis*, 68 U. Cin. L. Rev. 1023 ff (2000); M.S. Barr et al., *Behaviorally Informed Financial Services Regulation*, Asset Building Program Policy Paper. New America Foundation (2008): 2 ff (freely available at http://www.newamerica.net/files/naf_behavioral_v5.pdf). Indeed, except for the perfectly competitive market considered by the neoclassical approach, firms will not always voluntarily disclose the relevant information, both because it is costly and it can trigger competition, lowering prices. However, policymakers should adopt a strategy as less intrusive as possible, selecting only the relevant information to be disclosed.

grouping them into two categories: a traditional one and a new one. Paragraph 3.1.3 investigates if the regulation forces portals to disclose such information in an effective way.

3.1.1 Traditional Disclosure Mandates

The first group of disclosure mandates refers to the financial services' characteristics usually deemed by policy-makers to be crucial for investors. According to the regulation, the online portal must highlight in a brief and easily comprehensible way some information referred to as a standard crowdfunding offer. In particular, the disclosure targets: (i) the risk of financial loss; (ii) the risk of illiquidity, stemming from the lack of a secondary market for negotiating start-ups shares; (iii) the ban on distributing profits as long as the issuer is labelled as an innovative start-up; (iv) the fiscal benefits granted to such investments; (v) the specific corporate and bankruptcy regime applicable to innovative start-ups; (vi) the typical business plan's content; (vii) the withdrawal right and the procedures for its exercise. Along with these provisions, the regulation sets a detailed list of information referring to the specific investment proposed, concerning: (i) its risks; (ii) the features of the financial instruments offered; and (iii) the offer characteristics.

As stressed, the law provides a comprehensive set of data. But more is not always better: this massive amount of information could be difficult to manage by portal customers. In order to accurately evaluate the effects produced by such disclosure as to investors' decision making, it will be crucial to investigate how information should be disclosed (see section 3.1.3).

Nonetheless, looking at the list, a preliminary consideration on its content can be made. It seems that one relevant piece of information is missing and should be included. The duties of disclosure currently selected by Consob are related to two distinct phases: the pre-contractual one (before the investment is concluded); the contractual one (when the investment is about to be closed). But information should also target the post-contractual phase, which is equally relevant for crowdfunders. Currently, it is up to the portal to publish periodic reports on the start-up's trends. Yet, a compulsory update of both firms' financial situation and business-plan implementation should be periodically guaranteed. This kind of provision could strengthen the shareholders right to access company information, as granted by general business law. Moreover, providing such information will not be burdensome for prospective backers, since the updates are meant to be processed at a later stage, after closing the investment.[13] The update would work as a powerful warning providing a feedback for backers. Indeed, since the amount invested is usually quite small, backers are not likely to monitor the investment on their own.[14] In the US legal and economics debate, the so-called feedback approach has been promoted by prominent scholars to regulate markets affected by asymmetric information.[15] If applied within the crowdfunding domain, it would allow crowdfunders both to easily monitor their portfolio and to withdraw their money from the start-up, if they are offered a different, more appealing, investment. The update can also prompt backers to cope with the previously mentioned 'disposition effect', which describes the tendency to hold onto losing shares for too long (see section 2).[16] As already said, such bias occurs because investors prefer to take a higher risk in order to delay a prospective loss. Therefore, the periodic report should become mandatory, shifting the disclosure burden from the online portal to the issuer, which is closer to the source of the information to be delivered.

3.1.2 New Disclosure Mandates Tailored for Crowdfunding Market

The second group of disclosure mandates encompasses information and data deemed to be crucial for a specific type of investor: the crowdfunding backer. The idea is to put the 'crowd' characteristics – a completely new group of investors – at the centre of the regulation.[17] Such a group has a twofold goal: coping with crowdfunders' emotions and highlighting start-ups and portal organizational structure.

As to the emotional aspect, the law recognizes that the online context is far way riskier than the offline one. According to the regulation, the portal shall stress that investments in high-risk financial assets should be adequately proportionate to the crowdfunder's assets. Moreover, before subscribing, backers should answer a questionnaire demonstrating that they are aware of the investment's features and risks.

The idea is to deliver clients both a strengthened warning (as start-ups are usually riskier than other issuers) and a tool to better understand shares' characteristics. Clearly, the aim of these provisions is to empower backers, but are they succeeding? It is worth considering how online portals are implementing such requirements. One of the two currently operating portals has created a detailed questionnaire including several questions, forcing crowdfunders to: (i) browse the 'investor education' section of the Consob website (an 18-pages document named 'Important Things

13 The proposed provision would be compliant with the principles reported in the 'Second Growth Legislative Decree' that grants Consob the power to regulate equity-crowdfunding.

14 On the relation between insufficient control by investor and issuers moral hazard, see G. Ferrarini & A. Ottolia, *Corporate Disclosure as a Transaction Cost: The Case of SMEs*, 9 European Rev. Contract L. 13 ff (2013).

15 See R.H. Thaler et al., *Choice Architecture*, in *The Behavioral Foundations of Public Policy* 433 ff (Shafir ed., Princeton U. Press 2013).

16 The disposition effect also refers to the tendency to sell winning stocks too soon. Such findings trace back to the studies on risk aversion carried out by D. Kahneman & A. Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 Econometrica 263 ff (1979).

17 Concerning the 'crowd' characteristics, see in this Issue, the contribution of S. Hanks et al., *Madness of Crowds or Regulatory Preconception? The Weak Foundation of Financial Crowdfunding Regulation in the US and Italy*; A. Fink, *Protecting the Crowd and Raising Capital Through the JOBS Act*, (2012), (available at www.ssrn.com). The Author stresses that the crowd does not fit the mold of standard regulatory approaches.

to Know Before Investing in Innovative Start-ups Through a Portal'); (ii) declare that they can financially bear the possible full loss of the investment; (iii) declare they are aware of the right to revoke, under certain conditions, their investment; (iv) declare they are informed about the right to withdraw from the order, without charge, within seven days of the investment; (v) declare that the online portal team did not recommend any offer nor suggest any preference for one investment over another; (vi) declare they read the policy for managing conflict of interest; (vi) declare they read the policy for data protection; (vii) authorize the online portal to manage their personal data.

The underlining idea is to push crowdfunders to be properly informed and as conscious as possible before closing the investment. The default answer is set on the 'no' option, asking prospective backer to actively fill out the form in order to proceed. In this way, unflagging the default answer could work like a warning signal, requesting the crowdfunder to pay attention to what she is declaring. However, the outcome is a long survey, composed of eighteen questions. Such a strategy can backfire, since backers can react to the information overload just flagging the 'yes' option, without thinking of the consequences. An effective regulatory framework should take into account a simple, fundamental assumption: humans are lazy and when too much information has to be processed or recalled, the automatic system (instinct) is likely to prevail over the reflective one (self-control). As a result, crowdfunder's behaviour is driven by emotions, and the positive answer is automatically checked. What was meant to protect backers ends up to be useless or – worse – risky: after completing the survey, investors will not have the opportunity to complain before a judge that they did not understand the pros- and cons- of their financial decision.

We can now move to the last group of information: the one referring to start-ups and portal structure or organization.

As start-ups, the issuer should disclose on its website the existing shareholders' agreements. Since start-ups are usually small limited liability companies, this information is crucial: it allows crowdfunders to exactly understand how their shares will weigh in the company structure. Moreover, online portals are requested to issue the resumes of the company's directors. A proper assessment of the investment worthiness requires to evaluate skills and expertise of those in charge of managing the company. Lastly, the portal must publish a description of the clauses drawn up by the issuer to regulate the change-of-control cases (investment way-out procedures, existence of repurchase agreements, possible lock-ups and put option clauses in favour of the shareholders). On a general basis, the start-up's founders (i.e., those who developed the business idea) maintain a majority interest in the firm, but they could leave the company – or become minority shareholders – after raising equity via crowdfunding. It is crystal clear that a change-of-control case represents a serious threat for crowdfunders, since 'start-uppers' and their professional expertise are at the heart of the firm's success. An easy way out should then be granted. But it has to be stressed that not all this information is relevant at the investment decision stage. The law could conveniently postpone some disclosure mandates: for example, it is when a change of control occurs that crowdfunders should be informed about their rights. This would limit the overload effect.

Regarding portal structure and organization, the Regulation forces online portals to disclose information about: *i*) their business plan; *ii*) their internal organization; and *iii*) the measures adopted for managing conflict of interest and fraud risks. Since the investment is subscribed through the portal, such information should help customers evaluate if the portal properly addresses some significant operational risks. Building confidence in the portal's conduct is a preliminary step for the market to work, but will crowdfunders pay attention to such disclosure mandates? If other more effective safeguards are available, they deserve to be carefully considered. In this respect, it should be noted that the international crowdfunding industry has recently promoted the 'Crowdfunding Accreditation for Platform Standards' initiative, whose aim is to grant accreditations to portals that implemented best practices as to: *i*) operational transparency; *ii*) security of information and payments; *iii*) platform functionalities; *iv*) operational procedures.[18] Perhaps an effective match point between mandatory disclosure and self-regulation could be granting an independent public body the power to run such a reward mechanism.

All of the above-mentioned information is useful, but is it proposed in an equally useful format? The next paragraph is devoted to answering this question.

3.1.3 Is Information Disclosed in a Format Easy to Process?

In this paragraph, we investigate if the (massive) information previously described is disclosed in a manageable way.

As a rule, individuals suffer from attention deficit when processing complex information. One of the best-known experiments in psychology – named 'the invisible gorilla' – has unveiled a sort of selective attention bias that plays a crucial role in this context.[19] The experiment proves that when deeply concentrated on one task, roughly 50% of individuals become blind to other significant elements or information before their eyes (the so-called inattentional blindness paradigm). Moreover, it is

18 For further information, see http://www.crowdsourcing.org/caps.

19 See D.J. Simons & C.F. Chabris, *Gorillas in our Midst: Sustained Inattentional Blindness for Dynamic Events*, 28 Perception 1059 ff (1999). The test involved volunteers watching a video where two groups of players – three in white shirts and three in black shirts – are passing basketballs around. Then, volunteers were asked to count the passes among white shirts players while ignoring the passes of those in black. At some point, a gorilla bursts into the scene. The test found that only 50% of viewers saw the gorilla, even though it was easily visible for several seconds.

worth stressing that the complexity of managing massive amounts of information can result in what psychologists call 'ego depletion'.[20] Ego depletion refers to the idea that self-control draws on a limited pool of cognitive resources. When mental energy is low, because of a high demanding task to carry out, self-control is typically impaired. That creates a state of ego depletion. Experiencing such cognitive state lowers the ability to control oneself, and this condition lets instinct or emotions prevail in the decision making. Thus, avoiding complexity in disclosure mandates is crucial for preventing impulsive behaviour.

Consob is aware that the way information is disclosed significantly influences the investor's decision-making process.[21] The regulation sets a general rule according to which the portal 'shall make available to the investors, in a detailed, correct and non-misleading manner and without omissions, all the information regarding the offer that is provided by the issuer so that the investors can reasonably and completely understand the nature of the investment, the kind of financial instrument offered and the risks related to them and can take decisions on investment with full awareness'. Moreover, a specific warning, graphically highlighted, should appear on the front page of the pre-contractual document:

> The information on the offer is not subjected to approval by Consob. The issuer is the sole subject responsible for the completeness and truthfulness of the data and information supplied by the same. The investor must also take note of the fact that an investment in financial instruments issued by innovative start-ups cannot necessarily be cashed in and features a very high risk.

The regulation also establishes certain qualitative requirements targeting documents issued by portals. Two crucial aspects of the pre-contractual form are considered by the Authority: the document's language and length.

As to the first, the law states that the information on the offer shall: (i) be easily understandable and must be given in a non-technical language, without the use of specific jargon; (ii) be clear and concise; (iii) make use of common linguistic terminology, as far as possible; (iv) be comparable to other offers proposed by the portal.

As to the latter, the law sets that the pre-contractual document must be no longer than five pages of A4 format. The provisions also deal with the graphic – mildly, though – and clarify that if colours or companies logos are used, they must not affect the investors' understanding; including when the information on the offer is printed or photocopied in black and white. Lastly, document structure should make reading easy, by being printed in letters of a readable size.

These requirements show that the Authority is concerned about the disclosure phase. But do these provisions offer a proper and sufficient safeguard? Or can information still be proposed in a format which is difficult to process?

The 'invisible gorilla' and 'ego depletion' examples can be of great interest in answering such questions. Consider, for example, the following case. In order to limit their mental effort, when facing long pre-contractual documents, backers are likely to focus their attention only on what they perceive as a salient contractual dimension (like the total cost of the investment) taking no notice whatsoever of other provisions, although equally relevant.[22] For this reason, no adequate attention could be paid to other regulations: for example, the one stating that no profit can be distributed by the issuer as long as it is labelled as a start-up. Nonetheless, it is clear that such information turns out to be crucial in making a conscious decision: the financial remuneration is substantially frozen for years (to be specific, up to 4 years). The problem is worsened by myopia which creates a sort of illusion since long-term costs are disregarded. This occurs because people do not perceive them as real costs, because they are not immediate to incur. In the end, this type of disclosure which focuses on a list of investment's risks and characteristics turns out to be ineffective.

Thus, the main problems in crafting crowdfunding regulation can be summarized as follows: How to recap the relevant information in order to avoid crowdfunders being overloaded? How to make salient the information that appears to be non-salient in the (irrational) investor's eyes? In order to be more effective, the regulatory strategy should precisely select and highlight the most relevant information, setting a specific template of the pre-contractual document. Cognitive studies have proven that people preferences can be fully reversed if the (same) problem is presented in different ways: it is due to the previously mentioned framing effect (see section 2).[23] For instance, a well-known experiment demonstrated that people are more willing to have surgery with a 90% survival rate than one with a 10% mortality rate.[24] It is an unexpected outcome – at least for rational

20 D. Kahneman, *Thinking, Fast and Slow* 46 ff (Farrar, Strauss & Giroux 2011).

21 Over the past years, Consob has carefully investigated what policy implications can be drawn by behavioural finance: see N. Linciano, *Errori cognitivi e instabilità delle preferenze nelle scelte di investimento dei risparmiatori retail* (Consob 2010); V. Conti et al., *La finanza comportamentale e le scelte di investimento dei risparmiatori* (Consob 2011).

22 On the consumer/investor tendency to concentrate only on the contractual 'salient price dimensions' see O. Bar-Gill, *Seduction by Contract. Law, Economics, and Psychology in Consumer Markets* 18 ff (Oxford U. Press, 2012).

23 The framing effect has been unveiled through the famous 'Asian disease problem' by D. Kahneman & A. Tversky, *The Framing of Decisions and the Psychology of Choice*, 211 Science 453 ff (1981): see also D. Kahneman & A. Tversky, *Rational Choice and the Framing of Decisions*, in *Choices, Values, and Frames* 209 ff (Kahneman & Tversky ed., Cambridge U. Press 2000).

24 See B.J. McNeil et al., *On the Elicitation of Preferences for Alternative Therapies*, 306 New Eng. J. Med. 1259 ff (1982). The experiment is reported in P. Ubel, *Beyond Comprehension*, in *The Behavioral Foundations of Public Policy* 353 ff (Shafir ed., Princeton U. Press 2013).

people – since the given options are two sides of the same coin. Stressing one perspective over another can completely change people's preference.

As to crowdfunding regulation, it can be said that mandatory disclosure is a matter of choice architecture: as some design must be adopted, the best solution is to ask an independent body to do it, making the selected format compulsory. Otherwise, portals or issuers will themselves select which way to present the information and by doing so it will be in a non-neutral, artificially complex, way. Nevertheless, it should be clearly stressed that setting the format does not mean to prevent firms from devising new pricing schemes or new contract designs. Innovation and disclosure format standardization can coexist: for example, reporting the economic conditions in a mandatory scheme that can be easily adapted to the up-to-date pricing strategies.

Of course, this is not an easy task for a supervision Authority: reaching this goal requires that experts with different backgrounds, like psychologists and linguists, get involved in the regulatory process. Such professionals would be asked not only to pick the relevant information but also to design the more suitable format to display it. In this way, there could be room for insuring both the disclosure of mandatory information and the proper graphic layout. Long and wordy pre-contractual information proposed with no other aim than creating confusion and misperception would be punished.

One example of this extremely positive cooperation between heterogeneous backgrounds can be seen in the Italian credit market, where the supervision Authority drafted transparency pre-contractual documents along with linguists. The result was a simple, standardized, template that highlights features, costs and risks of common banking services, like mortgages and bank accounts.[25]

The same approach can be profitably implemented in other financial domains where complex financial products – like start-up shares – are marketed.

3.2 Other Safeguards Adopted by Consob

Disclosure mandates represent a tool that directly helps investors when making complex decisions. However, along with the duty of disclosure Consob has implemented other heterogeneous tools, in order to indirectly protect backers.

An important safeguard rests on the incentives created among portals by the normative framework. Indeed, portals' remuneration is based on both quality and success of the proposed business projects. This system pushes portals to compete against each other in picking the best start-ups, in order to build a successful reputation. It can be said that portals' incentives are in line with those of policymakers: in both cases, the goal is to deliver to crowdfunders financially robust business plans.

According to another tool pertaining to this group, the offer can be successfully closed only if at least 5% of the start-up shares are undersigned by some specific categories of investors (i.e., professional investors, banking foundations or innovative start-up incubators). Under the regulator perspective, involving expert investors could be positive for non-professional backers, since it allows them to benefit from sophisticated expertise in evaluating the start-up's financial structure. Putting it differently, professional investors perform a sort of 'due diligence' whose result works as a signal for backers. For this reason, it might be worth broadening this provision, making other groups of expert investors – like business angels – relevant for the 5% threshold. Yet, it should be noted that this safeguard has a drawback as it can lower the chances for the issuer to successfully raise the requested equity: for example, when professional investors are not interested in the start-up's project, but the backers would be willing to undersign the whole offer.

Moreover, the law requires portals to create a separate online section to be browsed by backers before investing. The underlying idea is to create a specific context that calls for crowdfunder's attention. By entering into a reserved area, backers are forced to make a more conscious decision, better evaluating the pros- and cons- of the investment.

Some additional safeguards are tailored for protecting crowdfunders in the post-contractual phase, i.e., after subscribing the offer.

In order to limit the effect of emotions when making decisions, the regulation grants a sort of 'cooling-off' period when an online investment (actually any kind of investment, not only in start-ups equity) is concluded. Backers have the opportunity to change their mind and withdraw the order, within seven days of the subscription. The provision responds to a simple assumption: it is much more risky to make a decision in the online context than in the offline one, since in digital domains, investors' decisions are easily affected by emotions and instinct.

Lastly, the law grants clients the right to waive their adhesion when a new fact (or a relevant mistake concerning the information given by the portal) occurs. Such right, named revocation right, can be exercised for seven days from the day the new information has been discovered.

This set of tools appears to effectively work as they protect crowdfunders without overwhelming them with data or information to remember.

3.3 Additional Safeguards Granted by the Italian Regulatory Framework

When discussing investor's protection, it is worth noting that in the crowdfunding domain another authority, along with Consob, could play a key role. Indeed, the Italian Competition Authority

25 Documents available at www.bancaditalia.it.

(hereinafter, 'AGCM') is in charge of enforcing the unfair commercial practices directive (hereinafter, 'UCPD') within the Italian legal system. According to the EU regulatory framework, the UCPD protects consumers in all consumer markets, with the exception of those where a special EU regulation applies. Pursuant the UCPD 'in the case of conflict between the provisions of this Directive and other Community rules regulating specific aspects of unfair commercial practices, the latter shall prevail and apply to those specific aspects'. The Markets in Financial Instruments Directive (hereinafter, 'MIFID') enforced by Consob represents such an exception. Yet, according to crowdfunding regulation, MIFID discipline is not applicable to: (i) single investment up to EUR 500 (total investments should not exceed EUR 1,000 per year) made by a natural person; (ii) single investment up to EUR 5,000 (total investments should not exceed EUR 10,000 per year) made by a company. It means that under these thresholds AGCM can enforce the UCPD offering crowdfunders strong protection, since such a directive is one of the first examples of EU behaviourally informed regulation. The approach proposed by UCPD is not purely based on disclosure mandates, and it pays specific attention to the way consumers make their decision. In other words, it is fact-intensive and it establishes a general 'behavioural standard'. Pursuant to the Directive, a commercial practice shall be deemed unfair if 'it materially distorts or is likely to materially distort the economic behavior with regard to the product of the average consumer whom it reaches or to whom it is addressed'. Then, for small investments, backers benefit from a strengthened protection: (i) the crowdfunding regulation, which sets rules of conduct for issuers and portals; and (ii) the general unfair commercial practice discipline, which prevents firms from adopting strategies that materially distort investors' behaviour.

4 CONCLUSION: WHICH POLICY IMPLICATIONS CAN BE DRAWN FOR A TRULY BEHAVIOURAL-ORIENTED REGULATION?

Emotions deeply affect human behaviour and far too often. As stated by a prominent scholar, we all are blind to our blindness.[26] When we are required to make decision within a complex domain, like the financial one, this effect is only heightened.

This is why a proper design of the decision-making environment can be a potent tool to induce desirable behaviour. Policymakers should then aim at de-biasing through regulation. Comparing the list of biases reported in section 2 with the regulatory strategy described in section 3, it is easy to note that disclosure requirements do not address all misperceptions (consider, for example, the disposition and framing effects). It is necessary to develop a new public policy based on observation of real decision-making processes in uncertain contexts: this is the only path that leads to properly address the most relevant misjudgments.

In this regulatory approach, disclosure mandates are part of the solution, but they are not the solution itself. Mimicking the normative option enforced in the Italian credit market – as far as consumer mortgages and bank accounts are concerned – we suggest to reshape the duties of disclosure, in order to avoid the 'overload effect' and to create an effective decision-making environment.

Among other adjustments, we argue to make mandatory the disclosure of some data that can successfully nudge investors to monitor and manage their portfolio. At the same time, we propose to postpone the disclosure of some information that does not appear to be relevant at the investment decision stage. Moreover, we consider crucial the adoption of mandatory standard pre-contractual documents whose format and content should be selected involving cognitive and linguistic experts.

Under a general perspective, we also believe that a valuable complementary safeguard should be to teach investors that misperceptions usually occur outside their consciousness and make them vulnerable.[27] Educating backers could lead them to realize that they are biased as every other investor is. This could help backers to limit their perception to be 'above the average' facing, at the same time, optimism and overconfident biases and the herd effect. Currently, crowdfunders (and investors in general) are not really involved in their educational process. On the contrary, they are passively targeted by the massive amount of warnings and information. As suggested in the US debate, information technology is of help. Consider the Investimente.it project: during the research, contributors' inner preferences and beliefs have been unveiled as they interacted with the online app, making them more educated and guided throughout a realistic map of their 'mental traps'. Such a tool points the way forward pushing scholars to investigate into future research questions: Can software and ergonomically designed data visualization help investors in better perceiving risks? Can innovation be exploited by policymakers in order to empower investors' rationality? Over the past years, numerous third-party applications have been created to help consumers to grasp complex contract products more intuitively. Consider, for example, that several applications have been developed in order to compare interest rates and fees on mortgages. Recall also the US Green Button initiative. Then, it is worth wondering if a new safeguard can be introduced in the regulatory framework: by designing a mandatory interactive test to be completed by investors to unveil their cognitive errors.

26 The expression has been coined by D. Kahneman when giving the presentation speech of his last book *Thinking, fast and slow*.

27 See E. Pronin & K. Schmidt, *Choice Architecture*, in *The Behavioral Foundations of Public Policy* 211 ff (Shafir ed., Princeton U. Press 2013).

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