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ARTICLE

Your Latest Trick?

Timely Identification and Response to Business Distress in Light of Bounded Rationality

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Abstract

Insolvency law has traditionally relied on the assumptions of the neoclassical economic model, which treat economic agents as rational, opportunistic actors who consistently act in their self-interest. These assumptions have shaped the legal frameworks governing insolvency, particularly in terms of how debtors and company directors are expected to respond to distress. However, this model fails to account for the cognitive limitations and biases that systematically impair decision-making during business distress. By systematizing the insights from behavioural economics, this paper challenges the neoclassical approach, offering a different interpretation of the actions of directors and shareholders, based on the cumulative effects of loss aversion, overconfidence, and hyperbolic discounting on their decision-making process. These biases can cause delays in recognizing and addressing the distress situation, worsen outcomes for creditors and reduce the likelihood of business recovery. The concept of 'cognitive hazard' is introduced as an alternative to the traditional moral hazard explanation, focusing on how these biases — rather than purely opportunistic behaviour — distort decision-making. The paper advocates for a recalibration of insolvency law incentives, suggesting that more immediate sanctions and rewards, along with organizational changes like decision-support systems, could help mitigate the effects of these cognitive distortions. This recalibration would align legal frameworks more closely with the real-world behaviour of economic agents, ultimately promoting a more effective and timely response to distress.

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1. Introduction

1. Economic agents are subject to numerous cognitive limitations that impair their ability to accurately assess their situation and develop strategies to overcome obstacles in their path. Entrepreneurs facing a distress situation, along with shareholders and managers of a company in distress, are no exception.
2. The dominant literature centers the tensions associated with the timely and adequate use of the pre-insolvency and insolvency system on the debtor's opportunism, who unduly postpones the moment of recognition in the hope of salvaging something from the wreck, an opportunistic hope pursued to the detriment of creditors. An analogous and even worse scenario, given their limited liability, concerns the shareholders of a company in distress and its directors, who would be the implementers of the shareholders' strategies.
3. That the firms' distress emerges late is a demonstrated fact, and that this delay harms both the probability of recovery and the extent of creditor satisfaction is equally proven. If this is true, however, what would be the consequences of a logical reversal concerning the causes that delay the timely emergence of a firm's distress? Are we equipped to deal with (and assist) actors who are less opportunistic than the assumptions of the neoclassical model but instead afflicted by numerous biases that reduce their ability to react just when it is most needed?
4. In the following sections, an attempt will be made to offer a reconstruction of the debtor's decision-making process when addressing the distress or insolvency that is more nuanced than the (often) simplistic one focused on opportunism. This will be done by analysing the cognitive illusions that are most relevant in this context and offering some insights for reading and, possibly, correcting the current regulatory system.

2. The debtor's decision-making process in the shadow of the neoclassical economic model

5. The neoclassical economic model has long served as a key reference in economics and law, grounded in three core assumptions that can be synthesized in the (*i*) *rationality* of the economic agents, equipped with unrealistic cognitive, computational, and memory abilities, their (*ii*) *opportunism*, which implies actions by the economic agents solely in their self-interest, with no regard for the others' well-being and (*iii*) an unlimited *willpower*, envisaging the constant choice of strategies maximizing their long-term interests, even when they are contrary to their short-term interests.[2]

2 See Christine Jolls, Cass R Sunstein, and Richard H Thaler, 'A Behavioral Approach to Law and Economics' (1998) 50(5) Stanford Law Review 1480. As will be clarified later, unlimited rationality, when applied to the decision-making moment, becomes relevant whenever legal subjects must

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

6. As is well known, behavioural studies have challenged these assumptions by revealing systematic and predictable biases that deviate from the idealized rational agent conduct. This research, initially rooted in psychology and now spanning various fields, distinguishes between two types of agents: 'Econs,' who are perfectly rational and informed, and 'Humans,' who exhibit limited cognitive abilities and make fallible decisions.[3]
7. The validity of economic models is crucial for analysing laws and institutions. If models like the neoclassical one fail to accurately describe or predict real-world behaviours, the resulting analyses and recommendations may be flawed.[4] In the context of bankruptcy law, traditional models based on rational actors may distort the understanding of how business crises are handled and how they evolve when the debtor and its creditors are called to interact. Instead of

assess the probability of a future and uncertain event. See generally John von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior* (Princeton 1944); Gary S Becker, *The Economic Approach to Human Behavior* (Chicago 1976); Richard A Posner, *Economic Analysis of Law* (4th edn, Boston 1998).

3 With regard to the distinction between two different categories, see Richard H Thaler and Cass R Sunstein, *Nudge: Improving Decisions About Health, Wealth, and Happiness* (Yale University Press 2008). For a comprehensive and detailed overview of the origins, methodology, and results of behavioural economics, see Colin F Camerer and George Loewenstein, 'Behavioral Economics: Past, Present, Future' in Colin F Camerer, George Loewenstein, and Matthew Rabin (eds), *Advances in Behavioral Economics* (Princeton University Press 2004) 3; Hamid Hosseini, 'The Arrival of Behavioral Economics: From Michigan or Carnegie School in the 1950s and 1960s?' (2003) 32(4) Journal of Socio-Economics 391; E-M Sent, 'Behavioral Economics: How Psychology Made Its (Limited) Way Back Into Economics' (2004) 36(4) History of Political Economy 735; Florence Heukelom, *Behavioral Economics: A History* (New York 2014); Richard H Thaler, *Misbehaving: The Making of Behavioral Economics* (Allen Lane 2015); Edward Cartwright, *Behavioral Economics* (Routledge 2014); Steven Durlauf and L Blume (eds), *Behavioural and Experimental Economics* (Palgrave 2009); Reid Hastie and Robyn M Dawes, *Rational Choice in an Uncertain World: The Psychology of Judgement and Decision Making* (2nd edn, Sage Publications 2010); Daniel Kahneman, *Thinking, Fast and Slow* (Penguin 2011).

4 As highlighted by Milton Friedman, the study of economics and its models should not be judged by their assumptions but by the quality of their predictions. See Milton Friedman, 'The Methodology of Positive Economics' in Milton Friedman, Essays *in Positive Economics* (University of Chicago Press 1953) 14. Regarding the descriptive capacity of the new model derived from behavioural studies, specifically its ability to describe real-world human behaviour, the greater accuracy of this model has never been seriously questioned. As for its predictive capacity, the development of prospect theory and the refinement of behavioural models have helped simplify and systematize scientific evidence gathered over decades. Given the results of behavioural economics studies, it is now possible to assert that the 'post-neoclassical' economic model not only provides a better description of human behaviour but also offers more accurate predictions. See Eyal Zamir, 'Refounding Law and Economics: Behavioral Support for the Predictions of Standard Economic Analysis' (2020) 16(2) Review of Law and Economics 267. Regarding the predictive capacity of the post-neoclassical model, see Cartwright (n 3) 263; Jolls, Sunstein and Thaler (n 2) 1471. The latter highlight that if the neoclassical economic model were to function correctly and predict individual behaviour with sufficient accuracy, the behavioural model would lose much of its interest.

focusing only on the opportunism and rigorous cost-benefits analysis of the economic actors, it is important to recognize that cognitive limitations play a significant role in how directors handle crises.

8. The behavioural studies have challenged the foundations of bankruptcy law theories that rely on the rational actor model. This model has heavily influenced corporate and bankruptcy law in two key ways, one regarding the shareholders' behaviour, assuming that shareholders will consistently make rational and opportunistic decisions, the other regarding the management decision-making, assuming that the company's management will consistently make rational decisions when deciding how to react to the company's distress.[5]
9. These assumptions have shaped the development of the legal framework governing business crises. It should not be surprising that, in bankruptcy cases, there's often a gap between the expected and actual behaviour of economic agents, particularly the managers. The traditional model overlooks certain decision-making dynamics that are now recognized in the 'post-neoclassical' economic model, helping to explain some persistent ambiguities in bankruptcy law.[6]
10. The 'Econ' debtor, based on the neoclassical model, will adopt behaviour B in response to a given input A that alters the expected utility of its actions, provided that doing so indeed maximizes its utility. The 'Human' debtor, however, due to its inability to replicate the decision-making process of a perfectly rational agent, will be subject to the systematic and predictable risk of deviating from behaviour B. This hypothetical framework can be applied in various areas of economic analysis of law, including bankruptcy law.
11. We can thus imagine a situation in which, so as to encourage a specific behaviour from the debtor – in this example, timely action to resolve the company's difficulties (behaviour B) – the legislator introduces a series of rewards for a debtor

5 See Robert K Rasmussen, 'Behavioral Economics, the Economic Analysis of Bankruptcy Law and the Pricing of Credit' (1998) 51(6) Vanderbilt Law Review 1679, 1690, who, after highlighting the first two aspects mentioned above, also identifies a third 'pillar' on which economic analysis of law relies in the field of insolvency law, namely the rational determination of the cost of financing to firms by creditors. Also see Morten Huse et al, 'New Perspectives on Board Research: Changing the Research Agenda' (2009) 15(1) Journal of Management & Governance 13; Donald R Korobkin, 'Value and Rationality in Bankruptcy Decisionmaking' (1992) 33 William & Mary Law Review 333, 338, where it is highlighted that:
'the economic account first defines a standard by which to evaluate any bankruptcy decision: the "correct" outcome maximizes economic returns for creditors as a group. It then provides guidelines for constraining judicial deliberation so as to increase the likelihood of a decision that will be consistent with this wealth-maximizing standard.'

6 It is possible to think of all those situations and issues covered by insolvency law that still do not have effective solutions and which will be examined in detail later.

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

who acts promptly, along with penalties if they fail to do so (input A). The 'Econ' economic agent (in our example, the debtor) will typically maximize his or her utility by responding to incentives and avoiding penalties. The 'Human' debtor, however, instead of responding in the same way as the 'Econ' agent, might be influenced by various cognitive illusions, which we will examine later, potentially delaying its response when managing the distress.[7]

12. This situation leads to a double failure: (i) an external observer, reasoning within the framework of expected utility theory, will be unable to grasp the real causes of the debtor's unexpected behaviour, which will be read — depending on the interpretation — as irrational or as opportunistic, if not fraudulent; (ii) lawmakers will struggle to implement an effective response, due to the overlooking of fundamental dynamics of human behaviour. It is therefore necessary to adjust the analysis of insolvency law to account for the 'Human' debtor's conduct, in order to address inefficiencies that, to date, cannot be resolved by an approach disconnected from reality.[8]

3. The 'sunk cost' fallacy and the debtor's decisions

13. An enriched understanding of the decision-making process of the economic agents can be illustrated through the 'sunk cost fallacy', which has a potential impact on their conduct in the business' distress context. This cognitive bias leads individuals, such as company directors, to continue investing in a failing project simply because of the irrecoverable costs already incurred. The sunk cost fallacy is also known as the 'Concorde Fallacy,' as the governments of the

7 This approach has been and continues to be applied, particularly in the United States, across various fields of law, leading to a general advancement in legal science, enriched and 'three-dimensionalised' by new discoveries in economics, psychology, and social sciences. On this point, see Ward Edwards and Detlof Von Winterfeldt, 'Cognitive Illusions and Their Implications for the Law' (1986) 59(2) Southern California Law Review 225. See also Donald C Langevoort, 'Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (and Cause Other Social Harms)' (1997) 146(1) University of Pennsylvania Law Review 101; as well as Herbert A Simon, 'A Behavioral Model of Rational Choice' (1955) 69(1) Quarterly Journal of Economics 99. The author, in addition to questioning the validity of the traditional model developed by economic science – featuring an economic man endowed with extensive (if not unlimited) knowledge and calculating ability – also considers the so-called administrative man, a 'relative' to the former but different in that he is embedded within an organization.

8 As already mentioned, misunderstandings regarding the real behaviour of economic agents can also lead to erroneous analyses of the economic-legal reality by those who, when studying and evaluating the validity of norms and institutions, use the lens of economic analysis of law. Indeed, if the economic model is based on false premises and produces incorrect predictions, the consequent analysis will be irreparably flawed. See Cass R Sunstein (ed), *Behavioral Law & Economics* (Cambridge University Press 2000) 3.

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

United Kingdom and France, considering the substantial costs already incurred and the prestige invested in the development of the famous supersonic airliner, continued to allocate significant funds even after it became evident that the project was financially unsustainable.[9]

14. Under the rational choice model, the 'Econ' debtor's directors, upon recognizing clear signs of the distress, should disregard sunk costs and act to minimize damage by reorganizing the business or liquidating it, if the first option is impossible.[10] This approach generally aims to maximize utility for creditors and shareholders by either swiftly restructuring or liquidating the company when necessary.
15. Indeed, if there is still some equity value to be preserved and the going concern is not lost, which is common if the situation of distress is addressed early on by the debtor, the creditors' loss can be minimized, and shareholders will receive the potential surplus from the procedure.
16. Conversely, if the equity capital has been completely depleted and there is no prospect of generating a surplus from the procedure, the shareholders and the management might have an opportunistic interest in continuing the business, which is now devoid of equity capital and financed solely by creditors. The delay in addressing the firm's distress is traditionally linked to moral hazard — or, depending on the conception of the company one adopts, to a negative externality imposed on creditors — framed as opportunistic conduct of the shareholders and directors that, if the investment in terms of equity has vanished, would lead to an attempt to lift the company's fortunes by making or authorizing high-risk actions, at the expense of creditors alone.[11]

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9 See Erik Angner, *A Course in Behavioral Economics* (3rd edn, Bloomsbury Academic 2021) 39; Stefan Roth, Thomas Robbert, and Lennart Straus, 'On the Sunk-Cost Effect in Economic Decision-Making: A Meta-Analytic Review' (2015) 8(1) *Business Research* 99.

10 By acting promptly to preserve the going concern and maintain the company's values, the 'pie gets bigger'. It should be noted that the deterioration of the economic and financial situation of the distressed company leads to a drastic reduction in the entrepreneur's ability to respond, as the time available to reach an agreement with creditors is significantly reduced, as is the negotiating power. Indeed, with the worsening of their debt situation and a (often) corresponding decrease in liquid assets, the viable alternatives for restructuring the company become markedly narrower. How this pie will ultimately be distributed will be subject to negotiation among the key players in the restructuring procedure. It should also be noted that administrators will seek to maximize their own utility by preserving their position within the company and minimizing the risk of potential liability actions against them.

11 See Frederik Drescher, 'Insolvency Timing as an Agency Problem' in Frederik Drescher (ed), *Insolvency Timing and Managerial Decision-Making* (Springer 2014) 10; Elettra Agliardi and Rainer Andergassen, 'Last Resort Gambles, Risky Debt and Liquidation Policy' (2009) 18(3) Review of Financial Economics 142; Ondřej Knot and Ondřej Vychodil, 'Bankruptcy Regimes and Gambling on Resurrection' (2006) Economic Institute, CERGE-EI Working Paper No 290 <https://www.cerge-ei.cz/pdf/wp/

17. It is worth clarifying that the reconstruction just outlined tends to treat directors and shareholders as a single actor. This identification is largely accurate in closely held companies — the vast majority of European firms — where ownership and management typically overlap, and it will be retained in what follows for ease of exposition; it does not hold, however, for larger corporations run by professional managers. There, the delayed reaction to distress must also be read through the lens of a further agency relationship: not (or not only) the one between shareholders and creditors, but the one between directors and creditors. As losses erode the value of equity, creditors progressively replace shareholders as the residual claimants on the company's assets, while directors formally remain agents of the shareholders who appointed them. It is on this misalignment that the well-known debate on the 'shifting' of directors' duties in the vicinity of insolvency rests, of which Article 19 of Directive (EU) 2019/1023 — requiring directors to have due regard, *inter alia*, to the interests of creditors — is a deliberately minimalist expression. For the purposes of the present analysis, however, the distinction reinforces rather than weakens the argument: whether directors act as (imperfect) agents of the shareholders or pursue interests of their own — the preservation of office, reputation and human capital — the decision whether and when to react to the distress is in either case taken by human decision-makers, exposed to the cognitive illusions examined in the following sections; what changes is the structure of incentives on which the law must operate, a point to which we shall return (see paragraphs 40, 52 and 53 below).
18. However, also the second situation described above (paragraph 16) should not alter the course of action for the debtor's management. There are two main reasons for this. The first concerns the risk for the directors of the company, in the event of no reaction to the firm distress, of being exposed to liability actions for any harm caused to creditors, which, if proven, could negate any profits derived from maintaining, whether for a short or long period, a role in managing the

Wp290.pdf> accessed 8 February 2026. As is well known, moral hazard involves taking excessive risk due to a misalignment between the party exposed to the costs or negative effects of the gamble and the beneficiary of its positive outcome. On this point, see Richard J Arnott and Joseph E Stiglitz, 'The Basic Analytics of Moral Hazard' (1988) 90(3) Scandinavian Journal of Economics 383; Kenneth J Arrow, 'The Economics of Moral Hazard: Further Comment' (1968) 58(3) American Economic Review 537, where it is highlighted that 'the principal-agent relation is very pervasive in all economies and especially in modern ones; by definition the agent has been selected for his specialized knowledge and therefore the principal can never hope completely to check the agent's performance. You cannot therefore easily take out insurance against the failure of the agent to perform well.' Also see Joseph E Stiglitz, 'Risk, Incentives and Insurance: The Pure Theory of Moral Hazard' (1983) 8(1) Geneva Papers on Risk and Insurance 4.

company and pursuing the shareholders' interests. The second reason involves potential reputational damage to those who contributed to causing and, especially, worsening the company's distress.

19. Despite that, the directors of a 'Human' debtor, due to the sunk cost fallacy, are exposed to the risk of persisting in a failing project in an attempt to recover these irrecoverable costs, worsening the company's already fragile situation. Indeed, such a situation occurs with considerable frequency in reality. Due to the difficulty in combating this phenomenon and its widespread nature, measures have been adopted by the European legislator to equip entrepreneurs with tools enabling the debtor itself to detect, at an early stage, the deterioration of the company's economic and financial situation and signalling to it — not to the creditors or to the market — the need to act without delay (the so-called early warning tools under Article 3 of Directive (EU) 2019/1023).[12] Such tools are addressed to the debtor and operate on its perception of the distress: a design choice fully consistent with the reading proposed here, since it implicitly treats the late emergence of the crisis as a problem of cognition, and not merely of opportunism (see further section 9 below). Such persistence highlights the limitations of traditional models in predicting actual decision-making during crises.
20. Behavioural economics studies, however, offer an alternative explanation. Directors' actions against creditors' interests, once risk capital is gone, may stem not just from mere opportunism but also from cognitive biases like loss aversion, overconfidence, and hyperbolic discounting, that will be analysed both separately and together to offer a systematic and three-dimensional understanding of the debtor's decision-making process when facing insolvency.

4. The 'as if' approach to bankruptcy

21. As already noted, two foundational elements of the 'as if' approach adopted by the neoclassical model are the consideration of the economic agent as if they were unlimitedly rational and unlimitedly opportunistic. This approach is reflected and implicitly adopted by the creditors' bargain theory, according to which the set of bankruptcy law rules are (or should be) a system designed to

12 Article 3(1) of Directive (EU) 2019/1023 requires Member States to ensure that debtors have access to 'one or more clear and transparent early warning tools which can detect circumstances that could give rise to a likelihood of insolvency and can signal to them the need to act without delay'. Article 3(2) mentions, among such tools, alert mechanisms triggered by missed payments, advisory services provided by public or private organisations, and incentives for third parties holding relevant information about the debtor — such as accountants, tax and social security authorities — to flag negative developments to the debtor itself.

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

reflect the agreement that creditors would be expected to reach among themselves if they were able to negotiate such an agreement *ex ante* in order to maximize their utility.[13]

22. This theory has provided a valuable interpretative tool for understanding and justifying some fundamental rules of the bankruptcy law system, such as the moratorium on creditors' actions against the debtor's assets and the protection to new and interim financing to the debtor. According to this approach, the set of bankruptcy rules addresses the need to provide a solution to a common pool problem, where the action of an individual creditor to obtain satisfaction from the debtor's assets would be detrimental to the value that can be secured for the entire pool of creditors if coordination is not ensured.
23. The behaviour adopted by creditors, when the bankruptcy regime produces its effects, is, under some fundamental aspects, directed and 'rationalized' by a set of rules that impose a course of action that cannot be affected by any bias precisely because it is bound; consequently, the application of the aforementioned rules shapes the behaviour of an entire class of economic agents – the creditors – based on the mould of an ideal economic actor that the neoclassical theory assumes as the foundation of its model.[14]

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13 The hypothetical contract theory and other reconstructions of the regulatory framework in insolvency law stem from the neoclassical rationalist economic model. See Thomas H Jackson, 'Bankruptcy, Non-Bankruptcy Entitlements and the Creditors' Bargain' (1982) 91(5) Yale Law Journal 866, with reference to the widely adopted creditors' bargain theory later incorporated and expanded upon by the author in *The Logic and Limits of Bankruptcy Law* (Cambridge University Press 1986). Jackson has developed two important theories of bankruptcy law, namely the hypothetical contract theory and the mirror the non-bankruptcy rule result, which have been adapted in various legal systems. Also see Thomas H Jackson and Douglas G Baird, 'Corporate Reorganizations and the Treatment of Diverse Ownership Interests: A Comment on Adequate Protection of Secured Creditors in Bankruptcy' (1984) 51(1) University of Chicago Law Review 97, which starts with a nearly prophetic statement: 'bankruptcy law does not exist in a vacuum, yet one cannot spend much time reading in the field without noting that few judges or scholars have taken this observation to heart.' As previously mentioned, the vacuum in which insolvency law is still situated—where actors are portrayed as rational agents—is, in the author's view, one of the main limitations of the current regulatory framework.

14 The behaviour imposed on creditors is, as noted by the proponents of the theory, the result of a hypothetical agreement. The agreement among creditors has never been actually reached and, most likely, could never be reached, as it would impose unrealistic costs and timelines relative to the demands of economic reality. See Thomas H Jackson (n 13) 860; also Robert E Scott, 'Through Bankruptcy with the Creditors' Bargain Heuristic' (1986) 53(2) University of Chicago Law Review 690. For a critical reading of the theory, see Riz J Mokal, 'The Authentic Consent Model: Contractarianism, Creditors' Bargain, and Corporate Liquidation' (2001) 21(3) Legal Studies 400. Thus, a system of general norms has been introduced to ensure the adoption of behaviour that optimizes the final utility of all involved economic actors, imposing a cooperation that, in general terms, would be difficult to imagine without external intervention. On this point, see Thomas H Jackson (n 13) 866; see also Robert C Clark, 'The Interdisciplinary Study of Legal Evolution' (1981) 90(5) Yale Law Journal 1250.

24. Given this, to clarify what will be explained, it is worth taking a step back and recalling an effective subdivision of the bankruptcy system, which is generally articulated into two main phases: the first phase (or round) is generally left to the debtor's initiative, who is allowed to take action before the state of insolvency occurs and thus initiate negotiations with their creditors to reach an agreement with them. The debtor has a duty to react without delay to the situation of distress and to take action to overcome the firm distress and protect (or recover) the going concern. This duty has its roots, at the European level, in Articles 3 and 19 of Directive (EU) 2019/1023, the first one providing the need to adopt early warning tools and the second one requiring directors, when there is a likelihood of insolvency, to take steps to avoid insolvency while taking into account the interests of creditors, equity holders and the other stakeholders.[15] This framework has recently been completed by Title V of Directive (EU) 2026/799, which intervenes downstream, once the likelihood of insolvency has ripened into actual insolvency: directors must submit a request for the opening of insolvency proceedings within three months of having become aware — or of the moment they can reasonably be expected to have become aware — that the company is insolvent, on pain of civil liability for the damage caused to creditors by the failure to file in time (Articles 40 and 42). Member States may allow directors to discharge the duty by publicly notifying the company's insolvency in a register, or provide for its suspension where the directors take measures designed to avoid damage to creditors which afford the general body of creditors a level of protection equivalent to that provided by a timely request (Article 41).[16]

15 See Ilya Kokorin, 'The Future of Harmonisation of Directors' Duties in the European Union: The Preventive Restructuring Directive and Group Insolvencies' (2021) 30(3) International Insolvency Review 361; Renato Mangano, 'Directors' Duties in the Vicinity of Insolvency, Disqualification, Piercing the Veil' in Reinhard Bork and Renato Mangano (eds), *The Anatomy of Corporate Insolvency Law* (Oxford Academic 2024). In general, with regard to the directors' duties before insolvency Stephen M Bainbridge, 'Much Ado About Little? Directors' Fiduciary Duties in the Vicinity of Insolvency' (2007) 1 Journal of Business & Technology Law 335.

16 Directive (EU) 2026/799 of the European Parliament and of the Council of 30 March 2026 harmonising certain aspects of insolvency law, OJ L, 2026/799, 1.4.2026 (to be transposed by 22 January 2029). Under Article 40(2), the request must be submitted 'within three months of the directors having become aware, or being reasonably expected to have become aware, that the company is insolvent in accordance with national law', the duty covering insolvency proceedings other than preventive restructuring proceedings (Article 40(1)); Article 42 requires Member States to make directors liable for the damage caused to creditors by the failure to discharge that duty (cf recital 60, which refers to the deterioration in the recovery value of the company compared to a timely submission) and, where directors have taken the protective measures contemplated by Article 41(3), allows Member States to exclude liability where and to the extent that the directors demonstrate, on the basis of objective circumstances, that those measures were reasonably likely to secure an equivalent or better outcome for creditors (Article 42(3); recital 61).

25. The second round occurs if the debtor's attempt in the first round has failed (or if the debtor has not taken any action at all). In this second phase, the debtor will usually be dispossessed of its assets, and the procedure, aimed at forcibly realizing the creditors' rights, will, in most cases, be a liquidation. As is well known, it can happen that the debtor decides not to play the first round or decides to play it too late: why should the debtor adopt behaviour that contradicts the maximization of their utility? Behaviour that, as mentioned, would increase the 'pie' for all the economic agents involved?
26. One possible explanation, as has already been partly highlighted, stems from the fact that the debtor is not subject to rules that directly bind and rationalize their actions. The debtor's behaviour, before disclosing its distress and especially before accessing a restructuring procedure, remains *de facto* subject to the outcomes of the decision-making process of its management. The management may, therefore, adopt behaviour that responds to the predictions of rational choice theory and expected utility, and react promptly and 'virtuously' to the new situation that the company is facing, as required by law. Otherwise, as often happens, the management of the debtor will be subject to multiple cognitive illusions that, by influencing the decision-making process will, statistically and predictably, result in a significant difference between the actual and expected behaviour.[17]

5. The debtor's loss aversion

27. A cognitive illusion of primary importance in the context of the firm's distress is the loss aversion of the individuals. The systematic overestimation of losses compared to gains by the economic agent has been observed in numerous studies conducted over more than thirty years and is indeed one of the most significant phenomena for understanding many behaviours that were previously simply labelled as 'irrational'.[18]

17 The combined impact of limited availability of information and an equally limited capacity to process it, along with the effects of multiple cognitive illusions and heuristics adopted by management, results in a substantial difference between what occurs in reality and what was hypothesized ex ante based on abstract models. On this point, see Charles R Schwenk, 'Management Illusions and Biases: Their Impact on Strategic Decisions' (1985) 18(5) Long Range Planning 74; also R Michael Holmes Jr, Philip Bromiley, and Jean B McGuire, 'Management Theory Applications of Prospect Theory: Accomplishments, Challenges, and Opportunities' (2010) 37(4) Journal of Management 3.

18 See Amos Tversky and Daniel Kahneman, 'Loss Aversion in Riskless Choice: a Reference-Dependent Model' (1991) 106(4) The Quarterly Journal of Economics 1039; see also Pavlo R Blavatskyy, 'Loss Aversion' (2011) 46(1) Economic Theory 127; Colin F Camerer, 'Three Cheers — Psychological, Theoretical, Empirical — for Loss Aversion' (2005) 42(2) Journal of Marketing Research 129.

28. The cognitive illusion of loss aversion implies that the utility function of an economic agent is steeper in the domain of losses than in the domain of gains, with the consequence that the agent will give greater weight to changes involving a loss compared to an equivalent gain. The phenomenon described above systematically induces the subject making a choice that involves a sacrifice to favour a situation of inertia, thus leading to a strong propensity to favour the status quo, even when change would be in the agent's best interest.[19]
29. Bankruptcy law and its proceedings require significant and numerous changes in the legal and financial sphere of the actors involved: for this reason, loss aversion assumes a prominent role in the debtor's decision-making process when addressing the distress. Management, indeed, when faced with difficulties that would require corrective measures to prevent the worsening of the company's situation and to resolve the issues that led to the crisis, is often called upon to bear a sacrifice.
30. This sacrifice, in the initial phase, is generally represented by the cost of the professionals who are first asked to analyse and evaluate the company's situation and by the impact on the market of the manifest distress of the firm. Subsequently, the debtor will have to formulate a proposal to their creditors, generally contained in a restructuring plan, where the necessary steps and measures to overcome the causes of distress will be outlined: the measures contained therein usually provide for sacrifices that will fall, in the proportion resulting from negotiations with the creditors, on both the creditors and the debtor.
31. In this situation, the debtor is faced with the following choice: to incur a certain and immediate cost in exchange for a prospective benefit that is uncertain, at least from the debtor's standpoint, in both its size and its timing; or to ignore the signs of distress and avoid, for the time being, that certain cost. Once again, an 'updated' economic analysis of law allows us to understand and provide an explanation for a possible contributing cause of the debtor's procrastination in addressing the business distress, as loss aversion and the greater weight attributed to losses will significantly influence the debtor's decision-making process in the face of a predicted gain that is incapable of counterbalancing the debtor's value function.[20]

19 See Daniel Kahneman, Jack L Knetsch, and Richard H Thaler, 'Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias' (1991) 5(1) Journal of Economic Perspectives 193, 197-198, where it is noted that 'one implication of loss aversion is that individuals have a strong tendency to remain at the status quo, because the disadvantages of leaving it loom larger than the advantages'; see also E Angner (n 9) 51.

20 See Ricardo Camilli et al, 'Addressing Managerial Loss Aversion for the Corporate Value Creation Process: A Critical Analysis of the Literature and Preliminary Approaches' (2024) 14(1) Administrative

6. Overconfidence bias and the reaction to the distress

32. Overconfidence bias is a cognitive illusion that involves a tendency for individuals to give an unrealistic assessment of their abilities, intellect, and resources. In other words, individuals are unreasonably optimistic about their ability to face problems in front of them, as well as in assessing the likelihood of being exposed to negative events compared to other individuals in the same situation.[21]
33. In this regard, it is worth noting that even expert economic agents in their fields of specialization, including corporate directors, exhibit their convictions (and act accordingly) with a degree of certainty that is systematically and predictably greater than what is rationally possible. This bias has been extensively analysed in relation to the decision-making process and conduct of directors, revealing systematic and predictable deviations from the rational choice model in corporate governance, particularly in risk assessment and management.[22] What are the major consequences that this bias produces on the decision-making process of the entrepreneur in distress? And above all, what changes does the presence of the overconfidence bias impose on the economic analysis of law in this area?
34. The assessment of the company's situation and the choice regarding the measures to be taken in the context of the business distress are extremely complex. This situation, that is, the complexity of the economic and legal scenario where the entrepreneur's decision-making process takes place, as demonstrated by multiple studies, significantly exacerbates the effects of the overconfidence bias and therefore amplifies the gap between the ideal behaviour theorized by the neoclassical economic model and what is observed in reality.[23]

Sciences 5; Todd M Alessandri, Jan Mammen, and Kimberly Eddleston, 'Managerial Incentives, Myopic Loss Aversion, and Firm Risk: A Comparison of Family and Non-Family Firms' (2018) 91 Journal of Business Research 19.

21 For an analysis of overconfidence bias on the entrepreneur's decision-making process, see Antonio E Bernardo and Ivo Welch, 'On the Evolution of Overconfidence and Entrepreneurs' (2001) 10(3) Journal of Economics & Management Strategy 301; Ulrike Malmendier and Timothy Taylor, 'On the Verges of Overconfidence' (2015) 29(4) The Journal of Economic Perspectives 3.

22 See JB Heaton, 'Managerial Optimism and Corporate Finance' (2002) 31(2) Financial Management 33, where it is noted that 'managers are 'optimistic' when they systematically overestimate the probability of good firm performance and underestimate the probability of bad firm performance'. See also Max H Bazerman and Don A Moore, *Judgment in Managerial Decision Making* (8th edn, Wiley 2013); and Stephen P Ferris, Narayanan Jayaraman, and Sanjiv Sabherwal, 'CEO Overconfidence and International Merger and Acquisition Activity' (2013) 48(1) The Journal of Financial and Quantitative Analysis 137.

23 See, with specific regard to the analysis of this dynamic in relation to the conduct of entrepreneurs, Ioannis S Salamouris, 'How Overconfidence Influences Entrepreneurship' (2013) 2(1) Journal of Innovation and Entrepreneurship 1, where it is noted that 'the more difficult the task, the greater the chance of overconfidence to kick in and increase'.

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

35. When planning its response to the signs of distress, the debtor, as already noted, can adopt measures to address and manage the distress or continue with the 'normal' management of the business. The continuation of business activities without the debtor taking measures to address its distress or without accessing a restructuring procedure, if the conditions are met, can also be explained by an overconfidence bias on the part of the debtor in its ability to handle adverse events.[24]
36. In this regard, it should be noted that closely related to the overconfidence bias is the phenomenon known as the illusion of control, which can be summarized as the systematic and predictable tendency of individuals to believe they have control over a situation when in reality the control is partially or completely absent: the inaccurate assessment of risk inevitably leads to an inability to adequately manage it, with negative consequences both (i) in terms of adopting adequate preventive measures and (ii) in terms of measures aimed at addressing the adverse situation once it has occurred. The illusion of control has been extensively analysed and observed in studies considering the conduct of company directors and the justifications they provide for certain managerial choices.[25]

7. Hyperbolic discounting and the debtor's decision-making process

37. The cognitive illusions examined in the previous sections do not exhaust the range of biases relevant to understanding how – and to what extent – the debtor's decision-making process is influenced when facing the company's distress signals.
38. The phenomenon known as hyperbolic discounting, which consists of the predictable and repeated tendency of individuals to underestimate, applying a 'hyperbolic discount', the future costs and benefits in favour of a substantial overestimation of immediate costs and benefits, represents another interesting point of contact between behavioural economics studies and bankruptcy law. Indeed, economic studies have highlighted a systematic tendency of economic

24 Indeed, a systematic underestimation by company directors of the risk of adverse events and, more generally, of a deterioration in business activity has been highlighted, as reflected in the strategies they adopt. See JB Heaton (n 22) 33.

25 See Gerald R Salancik and James R Meindl, 'Corporate Attributions as Strategic Illusions of Management Control' (1984) 29(1) Administrative Science Quarterly 238. It has been observed in various studies and experiments that individuals, in a predictable and systematic manner, are convinced of having control over the situation they are in, even when this is not supported by reality. See EJ Langer, 'The Illusion of Control' (1975) 32(2) Journal of Personality and Social Psychology 311.

agents to make decisions aimed at obtaining immediate gratification in exchange for a substantial underestimation of the possibilities of deferred gains over time. Due to this cognitive illusion, there is a systematic gap between the behaviour abstractly attributed to the rational agent, who is assumed to be temporally consistent in its choices, and what is actually observed.[26]

39. Given this, it is necessary to ask what effects the mechanism just described has on the decision-making process of the debtor when called to balance the costs (and benefits) related to the adoption of measures that safeguard the value of the company and the costs (and benefits) related to their non-adoption. The management of a company in distress, which in the context of small and medium-sized enterprises often coincides wholly or partially with the figure of the shareholders, will find itself – in the face of the first signs of distress – in the position of having to decide whether and how to address its difficulties.
40. To do that, the debtor must incur significant costs in the short term in exchange for benefits placed in the medium and medium-long term. It has already been noted that the costs to be borne are in fact of two distinct kinds, falling on different actors. The first falls on the company itself and affects its cash flow: the fees of the advisors called upon to assess the company's situation and the direct and indirect costs of preparing, negotiating and implementing a restructuring attempt — costs that absorb liquidity precisely when it is scarcest and that, from the directors' perspective, also entail a personal burden in terms of time and attention. The second falls on the shareholders and consists of the partial or total loss of their stake and of control over the company that the restructuring plan may entail. The two components should be kept distinct, since they enter the decision-making process through different channels, depending on whether those who decide — the directors — act as agents of the shareholders or (also) in their own interest: a further manifestation of the agency problem referred to above (see paragraph 17).[27] The main benefits, on the other hand, consist of the

26 Unlike the so-called exponential discounting, which assumes that an agent's behaviour is temporally consistent, hyperbolic discounting presents a temporal inconsistency in the decision-making process of the economic agent, affecting the valuation and weight given to present and future benefits. See S Frederick, G Loewenstein, and T O'Donoghue, 'Time Discounting and Time Preference: A Critical Review' (2002) 40(2) Journal of Economic Literature 351; Partha Dasgupta and Eric Maskin, 'Uncertainty and Hyperbolic Discounting' (2005) 95(4) The American Economic Review 1290.

27 Aware of the deterrent effect of the first component, several Member States have promoted publicly funded advisory or mentoring schemes for enterprises in distress — the best-known example being the Danish 'Early Warning' programme, subsequently taken as a model by the EU-funded 'Early Warning Europe' network — and Article 3(2)(b) of Directive (EU) 2019/1023 itself lists advisory services among the possible early warning tools. In the terms adopted here, such measures can be read as devices that remove or reduce an immediate and certain loss which, owing to loss aversion

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

(potential) overcoming of the company's difficulties, with the related preservation of value for shareholders, as well as the neutralization of liability issues for directors who have identified and acted promptly to address and manage the business distress. On the contrary, the continuation of ordinary business activities has the effect of almost entirely avoiding costs and sacrifices in the present and immediate future, while simultaneously resulting in significant costs in the medium and long term.

41. The rational actor considered by the neoclassical model, when conducting the cost-benefit analysis of the scenario outlined above, will make a balanced and temporally consistent assessment of the various possible strategies in order to maximize its utility. Differently, the behavioural economics studies suggest that the management of the debtor, due to hyperbolic discounting, will tend to significantly overestimate present costs and benefits at the expense of future costs and benefits.[28]
42. Based on what we have just highlighted, it is possible to conclude that although future costs, particularly the risk of insolvency, even if accurately assessed, far exceed the immediate costs and 'benefits' of inaction, the hyperbolic discounting will distort the debtor's decision-making process in favour of a short-term view in managing its crisis. The benefit of 'not doing' that is, the savings in costs and additional resources to address non-postponable difficulties, will take the form of an oversized 'carrot' compared to the 'stick' of future consequences: this situation and the effects of the cognitive bias we are examining provide, in other words, a possible explanation for the delayed activation of tools and procedures by the debtor.[29]

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and hyperbolic discounting, weighs disproportionately on the debtor's decision (see sections 5 and 7 above).

28 In other words, according to the traditional economic model, an individual's preferences should remain stable and not be influenced by the temporal placement of the effects of their choices, as has been observed. The economic model that also accounts for hyperbolic discounting has shed light on the causes of the persistent gap between what is postulated by the neoclassical economic model and what is observed in reality regarding the decision-making process of the economic agent. The widespread use of the traditional exponential discounting model, incorporated into numerous models aimed at predicting behaviour and the occurrence of various economic and non-economic phenomena, should not be underestimated. See E Angner (n 9) 192.

29 With specific regard to the conduct of debtors facing financial difficulties, it has been observed that due to the influence of hyperbolic discounting, entrepreneurs tend to adopt a short-term approach to resource management rather than a medium- to long-term one. See Yang Liu and Jinqiang Yang, 'Entrepreneurship Dynamics under Time Inconsistent Preferences' (2015) 5(1) Journal of Mathematical Finance 40, 47 where it is noted that 'time inconsistency leads to underinvestment when the entrepreneurial liquid wealth is close to the liquidation boundary and overinvestment when the liquid wealth is far away from the exit threshold'. In a pre-insolvency situation, where the crisis of the enterprise is still reversible, taking measures to address the distress, including resorting to restruc-

43. The consequences of the hyperbolic discounting on the debtor's decision-making process align with the cognitive illusions previously analysed (i.e., loss aversion and overconfidence bias), contributing to explaining one of the possible co-causes of the debtor's behaviour during a business distress.

8. The directors' 'cognitive hazard'

44. The analysis presented above suggests that overexposure to risk and the failure or improper management of the firm distress may have a different and alternative explanation compared to the classic reconstruction that identifies moral hazard on the part of the company's insiders and the misalignment of risk they bear in continuing business activities once their stake in the company has been eroded, a calculated and opportunistic behaviour at the expense of creditors who have become, *de facto*, the sole financiers of the company.
45. With regard to the intentions of those who have assumed the risk, moral hazard presupposes a precise cost-benefit calculation by those exposed to it, along with the desire to derive a benefit. This premise could prove unfounded concerning the debtor in distress, given the above observations, which, as already noted, outline the profile of an economic agent who, in many situations, particularly those characterized by high complexity, is unable to make a coherent and rational cost-benefit assessment. In reality, the phenomenon of the undue continuation of business activities without taking measures to resolve the crisis, once its signs have manifested, may not only be the consequence of moral hazard but also the result of multiple cognitive biases that undermine and shape the debtor's ability to respond to the business distress, leading to what could be termed 'cognitive hazard'.[30]
46. It is important to clarify that the expression 'cognitive hazard' here refers to a phenomenon distinct from moral hazard, in which the assumption (or failure to

turing procedures, represents a conduct that helps preserve the value of the business for all involved stakeholders. For this reason, behaviours contrary to the maximization of economic agents' utility have generally been attributed to irrationality or opportunism. The emphasis on cognitive factors discussed here provides an additional, and potentially complementary, explanation of the behaviour of the debtor in distress.

30 Both the incomplete and, at times, incorrect assessment of their situation by the entrepreneur and the approach to response strategies in the face of distress, which may also result from a faulty cost-benefit calculation, are in stark contrast to a reconstruction that attributes a precise evaluation and corresponding strategy to the same individual. See R Michael Holmes Jr, Philip Bromiley, and Jean B McGuire, 'Management Theory Applications of Prospect Theory: Accomplishments, Challenges, and Opportunities' (2010) 37(4) Journal of Management 3; Lowell W Busenitz and Jay B Barney, 'Differences Between Entrepreneurs and Managers in Large Organizations: Biases and Heuristics in Strategic Decision-Making' (1997) 12(1) Journal of Business Venturing 9.

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

assume) of certain choices is not the result of a precise opportunistic strategy but rather the combined influence of multiple cognitive illusions that lead the debtor to take actions harmful to the company and its stakeholders. It should also be noted that identifying and attributing cognitive hazard to the debtor does not exclude the presence of additional and different (co)factors influencing the economic agent's choices.[31] On the contrary, what is being attempted is to provide a possible explanation for a co-cause of the behaviour observed, long considered alternately or jointly irrational and/or fraudulent by the debtor: in addition to contributing to providing greater clarity at the level of descriptive analysis of the phenomenon, the potential recognition of the cognitive hazard requires the adoption of corrections in the incentive/sanction system, which cannot be predominantly or exclusively calibrated on a model of a perfectly rational and opportunistic agent/debtor.

47. Is it possible to effectively deal with cognitive hazard to reduce its effects and ultimately bring the 'Human' debtor's behaviour closer to that desired by the policymaker?
48. If the decision-making process of the company's management is systematically and predictably influenced by cognitive illusions and these represent the main obstacle to the timely emergence of the distress, then a system of incentives and obligations calibrated on a perfectly rational economic actor and focused primarily on the concept of opportunism may not hit the mark. Instead, a system of rules that provides incentives and obligations aimed at addressing and interacting with the real decision-making process of the debtor's management, a system that considers the proven presence of cognitive illusions and significantly reduces their impact, may produce satisfactory results.
49. To this end, reference can be made to recent studies on the so-called architecture of choices, which, through an in-depth analysis of the decision-making process of 'Humans' as opposed to 'Econs,' have identified a normative line of action that allows mitigating the effects of cognitive illusions affecting individuals, with the goal of directing their behaviour towards the legislator's desired outcome.[32]

31 The concept of cognitive hazard encompasses and conceptualizes the situation faced by the human entrepreneur, as revealed by contemporary economic and psychological research. It highlights how various cognitive limitations influence and distort the entrepreneur's decision-making process, leading to behaviour that diverges from the idealized rationality of the neoclassical economic model.

32 See John F Tomer, *Advanced Introduction to Behavioral Economics* (Elgar 2017) 80; Richard H Thaler, Cass R Sunstein and John Balz, 'Choice Architecture' in Eldar Shafir (ed), *The Behavioral Foundations of Public Policy* (Princeton University Press 2017) 428 and Donald Low, *Behavioral Economics and Policy Design: Examples from Singapore* (World Scientific 2012).

9. A recalibration of the directors' incentives and of the internal structure of the companies

50. We can now focus on the consequences of what we have analysed in the previous sections on the incentives directed at the company's directors when the first signs of distress arise, in order to transition from the current system, centred on the opportunism of economic agents, to a system designed for 'human' agents. To do this, it is necessary to drastically reduce reliance on sanctions placed in a distant future that are unable to compensate, due to the biases analysed above, for the costs required to initiate a restructuring attempt, and on minimal incentive measures that are therefore systematically neglected.[33]
51. This transition requires moving towards a system that provides: (i) a sanctioning system that leverages the economic agent's loss aversion by not only clearly presenting the negative consequences and costs of inaction but also by placing these consequences in a near future; (ii) substantial enhancement of incentive measures, also placed in a near future, in order to avoid being subjected to hyperbolic discounting at the moment of choice by the debtor.[34] In other words, it is necessary to bridge the 'cognitive gap' in the development of incentives for the timely addressing of the firm distress, which results in a marked disregard for marginal incentives in terms of amount or temporal placement.
52. As to the addressees and the possible content of these measures, some examples may help. The recalibration proposed here is directed first and foremost at the directors, who are the actual decision-makers — and only indirectly at the shareholders, whose position overlaps with that of the directors in owner-managed companies (see paragraph 17 above). A first example operates on the liability side: directors who, upon the first signs of distress, activate an early warning tool, seek the advice of a qualified professional or initiate a preventive restructuring framework could benefit from a presumption of compliance with the duties they bear in the vicinity of insolvency (Article 19 of Directive (EU)

33 For a clear explanation of the various forms of intervention used to address individuals' bounded rationality and ultimately guide their behaviour in the direction desired by the policy-maker, see OECD, Tools and Ethics for Applied Behavioural Insights: The BASIC Toolkit (OECD 2019) <https://www.oecd.org/en/publications/tools-and-ethics-for-applied-behavioural-insights-the-basic-toolkit_9ea76a8f-en.html> accessed 8 February 2026; Cass R Sunstein, *Sludge: What Stops Us from Getting Things Done and What to Do About It* (The MIT Press 2021) 35.

34 See, regarding the impact (and weakening) of incentives placed in the distant future on the decision-making process of managers, Alexander Pepper and Julie Gore, 'The Economic Psychology of Incentives: An International Study of Top Managers' (2014) 49(3) Journal of World Business 350. On the greater effectiveness of reward measures rather than punitive ones to incentivize the actions of managers, see David De Meza and David C Webb, 'Incentive Design Under Loss Aversion' (2007) 5(1) *Journal of the European Economic Association* 66.

2019/1023); such a 'reward' — protection from hindsight-driven liability claims — is immediate and certain, and it expropriates no one, being financed by the very going-concern value that timely action preserves. This logic now finds explicit recognition in Articles 41(3) and 42(3) of Directive (EU) 2026/799 (n 16 above). A second example consists of incentives charged to the public purse rather than to creditors or shareholders: the Italian implementation of Directive (EU) 2019/1023 offers an illustration in the *misure premiali* attached to the negotiated settlement of the crisis (*composizione negoziata*), which reduce interest and penalties on tax debts for the debtor who has acted in a timely fashion (Article 25-bis of the Italian Crisis and Insolvency Code).

53. A third example concerns the personal position of the directors: since a substantial part of the private cost of a timely emergence of the distress lies in the fear of losing office, reputation and human capital, a shield against removal — limited in time and conditional upon a verified timely reaction — may operate as a powerful incentive, much as the debtor-in-possession model embraced by Article 5 of the Directive already does at the level of the company. This measure must, however, be handled with care: empirical studies on management turnover in distressed firms suggest that the replacement of incumbent managers is not necessarily value-destroying and may indeed improve post-reorganization performance; the design implication is, therefore, to reward the timeliness of the reaction, not the permanence in office as such.[35] Finally, on the shareholders' side, the reward for a timely opening of the proceedings may take the form of the allocation to old equity of a portion of the surplus generated by the early action itself — a rationale that has surfaced in the European debate on the relative priority rule and that, whatever position one takes in that debate, illustrates how incentives can be financed out of the value that timeliness creates rather than out of the creditors' pockets.[36]

35 See Stuart C Gilson, 'Management Turnover and Financial Distress' (1989) 25(2) Journal of Financial Economics 241, documenting the severe personal and career costs borne by managers of distressed firms — the very costs which, through loss aversion, feed procrastination; Edith S Hotchkiss, 'Post-bankruptcy Performance and Management Turnover' (1995) 50(1) Journal of Finance 3, where the retention of pre-bankruptcy management is found to be associated with worse post-reorganization performance; Lynn M LoPucki and William C Whitford, 'Corporate Governance in the Bankruptcy Reorganization of Large, Publicly Held Companies' (1993) 141(3) University of Pennsylvania Law Review 669, 723 (reporting at least one change of CEO in 91 per cent of the large reorganizations studied); Kenneth M Ayotte and Edward R Morrison, 'Creditor Control and Conflict in Chapter 11' (2009) 1(2) Journal of Legal Analysis 511 (finding that 70 per cent of CEOs are replaced in the two years preceding the bankruptcy filing).

36 See, in favour of flexible distribution rules as a means of encouraging the timely opening of restructuring negotiations, Lorenzo Stanghellini, Riz Mokal, Christoph G Paulus and Ignacio Tirado (eds), *Best Practices in European Restructuring: Contractualised Distress Resolution in the Shadow of the Law* (Wolters

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972

54. It is also possible to effectively address the cognitive hazard that affects the directors and their decision-making process by requiring, at an internal level in the company's organizational structure, specific measures designed to mitigate the effects of the cognitive illusions. In this regard, it is important to reference the OECD report *Tools and Ethics for Applied Behavioural Insights: The BASIC Toolkit* (commonly referred to as the BASIC Framework). This report provides comprehensive and detailed policy recommendations for developing 'behaviourally informed' regulatory strategies. These strategies are designed with consideration of how individuals, based on scientific evidence from behavioural studies, actually respond to regulations, allowing for adjustments to improve the effectiveness of these measures in practice.[37]
55. Without aiming to be exhaustive, and solely to provide a framework for the main strategies listed in the report to manage and reduce the effects of biases on individual behaviour, three distinct but interconnected types of measures can be highlighted. The first category includes measures that establish 'default' options and outcomes, taking advantage of individuals' natural tendency to prefer the status quo. This approach has been applied across various sectors and has proven effective in guiding economic agents toward desired behaviours, aligned with predetermined objectives, whether to protect specific categories or to enhance system efficiency. In the context of the company's internal structure, for example, it is possible to envision an internal accounting and administrative system that automatically generates a report when certain predefined conditions are met. This could be achieved through software that automatically sends a notification to the managers when a predetermined threshold, such as the debt/EBITDA ratio or other specific thresholds, is exceeded. The notification would be accompanied by suggestions for corrective measures to be adopted and the next steps to be concretely implemented.[38]

Kluwer 2018); critically, Roelf Jakob de Weijs, Aart Jonkers and Maryam Malakotipour, 'The Imminent Distortion of European Insolvency Law: How the European Union Erodes the Basic Fabric of Private Law by Allowing "Relative Priority" (RPR)' (2019) Amsterdam Law School Legal Studies Research Paper No 2019-10.

37 See OECD (n 33) 13, where it is highlighted that 'a better understanding of human behavior can lead to better policies. Policy makers looking for a more data-driven and nuanced approach to policy making should consider what actually drives the decisions and behaviors of citizens rather than relying on assumptions of how they should act.' For an analysis on the necessity of adopting norms that address the cognitive limitations mentioned earlier to achieve the objectives set by the legislator, see Oliver Oullier, 'Behavioural Insights Are Vital to Policy-Making' (2013) 501(7468) Nature 463.

38 As clarified by Cass R Sunstein, 'Deciding by Default' (2013) 162(1) University of Pennsylvania Law Review 1, the choice between the use of default rules and their alternative, which requires an 'active' choice by the economic agent, largely depends on the cost associated with the act of deciding and the cost of errors that may result from the active choice.

56. The second category comprises measures that provide decision-making support, sometimes through the involvement of a third party, to help neutralize potential biases during the decision-making process. Empirical studies have frequently shown the importance of involving an external party, independent of the group or organization, to significantly reduce the impact of self-reinforcing dynamics and groupthink, which often lead to suboptimal decisions. In practice, this can be implemented within a company's internal structure by appointing a turnaround expert to provide recommendations to management. While this approach is more challenging for smaller businesses due to the associated costs, it can become viable if external consultancy is sought only when necessary, triggered by internal signals such as reaching predetermined thresholds, as discussed earlier.[39]
57. The third category involves the use of 'framing' techniques, which focus on how different options are presented at the moment of decision. These techniques, grounded in behavioural economics, are designed to guide the behaviour of economic agents by shaping their responses to specific scenarios. By adopting the recommendations outlined in these guidelines, organizational structures would not only gather and report data and information to managers, but they would also actively prompt a response from decision-makers when necessary. One of the (many) practical applications of this kind of measure is the employment of dashboards that visually highlight key performance indicators (KPIs) relevant to the company's financial health. These dashboards could use colour coding, alerts, and trend comparisons to frame data in a way that emphasizes critical decision points for the directors. Consequently, when certain financial ratios (such as debt-to-equity or liquidity ratios) approach risky levels, the system could frame this data with clear warning signals, prompting decision-makers to take immediate action, rather than downplaying the seriousness of the situation.[40]

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39 For an analysis of the effects on the decision-making process of economic agents following intervention by external (expert) parties, see Matteo Cristofaro, 'Reducing Biases of Decision-Making Processes in Complex Organizations' (2017) 40(3) Management Research Review 270; Daniel Kahneman, Dan Lovallo, and Oliver Sibony, 'The Big Idea: Before You Make That Big Decision' (Harvard Business Review 2011) <https://hbr.org/2011/06/the-big-idea-before-you-make-that-big-decision> accessed 8 February 2026; and Kate M Kaiser and Robert P Bostrom, 'Personality Characteristics of MIS Project Teams: An Empirical Study and Action-Research Design' (1982) 6(4) MIS Quarterly 43.

40 This approach leverages framing to encourage quicker, more proactive responses to the crisis. The study of the framing effect is connected to the development of prospect theory, which highlights the substantial difference in individual choices depending on how a given situation and its alternatives are presented. See Daniel Kahneman and Amos Tversky, 'Prospect Theory: An Analysis of Decision under Risk' (1979) 47(2) *Econometrica* 263. For a detailed analysis of the phenomenon, see Eric J Johnson, Steven Bellman, and Gerald L Lohse, 'Defaults, Framing, and Privacy: Why Opting In-Opting

10. Conclusions

58. The widely documented delay of directors in addressing the distress, which we have attributed to a 'cognitive hazard', can be effectively addressed through a revision of the incentives directed at them when the first signs of difficulty arise, as well as through a well-designed organizational structure to reduce the influence of biases on the directors' decision-making process, which are essential for the proper fulfilment of their duties towards the company and its stakeholders.
59. The traditional incentive system, based almost exclusively on directors' liability, has shown that it alone is not capable of producing the correct timing for the emergence of the distress. These incentives — addressed first and foremost to the directors, as the actual decision-makers, and to the shareholders where ownership and management overlap — should have greater substance on the reward side, in the forms exemplified in section 9 above (liability safe harbours for timely reaction, rewards charged to the public purse, conditional protection of the directors' tenure, participation of old equity in the surplus created by timeliness), while sanctions should be brought closer in time and gain in clarity and certainty.
60. A revision of the current approach to insolvency law, which focuses primarily on the responsibility of company directors and their potential opportunism, is essential for enabling a timely response to crises. A new perspective must be incorporated into relevant regulations to: (i) ensure that 'Human' directors are not sanctioned when, in line with the rescue culture promoted by Directive (EU) 2019/1023, they attempt to save the company, even within the constraints of their capabilities and the complexities of their situation; and (ii) clearly define, from both a general-preventive and practical standpoint, the behaviour expected of debtors in the pre-insolvency phase, without basing these expectations on an idealized, unattainable standard that assumes perfectly rational actors.

Out' (2002) 13(1) Marketing Letters 5; Irwin P Levin, Sandra L Schneider, and Gary J Gaeth, 'All Frames Are Not Created Equal: A Typology and Critical Analysis of Framing Effects' (1998) 76(2) Organizational Behavior and Human Decision Processes 149, where different types of framing effects are identified, and their characteristics are analysed through a comprehensive review of the literature on the subject.

European Insolvency and Restructuring Journal – DOI: 10.54195/eirj.27972