Managers internal factors and LBO restructuring decision-making

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Abstract

We study the preferences of managers when faced with two types of restructuring choices in financially distressed firms, the first belonging to the family of organizational restructuring and the second to the family of financial restructuring: The choice between massive layoffs or debt increase to reorganize the company. Both the complexity of the situation and individual personality traits can affect a manager's preferences. We investigate the effect of complexity by experimentally manipulating cognitive load and measure social value orientation, a personality trait of managers. We find that, on average, cognitively loaded managers prefer laying off large numbers of employees rather than increasing the debt level, while managers with high social value orientation avoid massive layoffs. Further analysis suggests that pro-social managers under cognitive load follow deontological rules in their decisions. These results imply that the performance mechanisms emphasized, for example in LBOs, have their own limitations during periods of financial distress. This study shows that one of these limits is related to cognitive distortions and interpersonal traits. In a distress situation, agency costs can increase due to these factors.

Keywords— cognitive load, social preferences, leverage buyout, restructuring decision-making

JEL classification—G41, G34

1 Introduction

When a firm faces financial distress, reorganization instead of bankruptcy is often desirable because it avoids liquidation losses or a suboptimal alignment of incentives in existing contracts (Hotchkiss et al. (2021); Altman et al. (2019); Broude (1984); Brown (1989); Bulow and Shoven (1978)). However, achieving an optimal alignment of the interests of the different residual creditors may be a complicated task for the manager in reorganization, due to the potential conflicts between the different residual creditors, among other things (Brown (1989)). The nature of the decisions taken to turn around a company in financial

distress can thus be affected by the complexity of the situation and the divergent interests to be taken into account (Ayadi (2012); Cappelen et al. (2019); Kim (2022)). Contextual elements then play an important role in firm recovery (Francis and Desai (2005)). Some research has in fact shown that depending on the bargaining power of different claimants, the outcomes of restructuring can be different (Bulow and Shoven (1978); Aivazian and Callen (1983)).

One of the problems facing the manager when designing and implementing a reorganization plan is to know what consequences the different decisions will have both on the company and its individual employees, on the shareholders and creditors, but also on himself because of the potential punishment he may incur. Knowing how alternative reorganization plans allocate value and risk among the different claimants is therefore one of the important objectives that he must take into account during the reorganization task (Senbet and Seward (1995)). Several studies have addressed this issue by examining the relationship between conflicts of interest, coalition formation, and the resolution of financial distress. The results of these studies show that conflict of interest can reduce efficiency as claimants form coalitions to achieve wealth transfers from non-aligned claimants (Senbet and Seward (1995); Bulow and Shoven (1978); White (1989)). In this situation, managerial decisions made for reorganization may be influenced by residual creditor groups with strong bargaining power, and injure residual creditors with weak bargaining power. One consequence with respect to less powerful residual creditors may, for example, be a strong preference for massive layoff decisions or a set of restructuring measures that harm employees by making them bear the risk of the firm's failure (Daigle and Maloney (1994); Cappelen et al. (2019)). On the other hand, a morally oriented manager may want to avoid decisions involving massive layoffs at all costs (Xu and Ma (2016)). In LBO firms, conflicts between residual creditors may be more extensive, as in addition to inter-group interest differences, intra-group differences are also present (Taatian (2021)).

At the core of this situation, it is possible to question the manager's preferences and how these are influenced by the manager's ability to manage multiple divergences on the one hand and by the natural traits of his personality on the other. Cognitive psychology has indeed proven that individuals are sensitive to the conditions of their environment that lead to a change in behavior. Several explanations have been put forward by psychologists, among which we can cite those that put forward cognitive and social factors (Gray and Bjorklund (2018), p. 77). In a decision-making environment characterized by complexity and by the pressure to take into account the various interests of residual creditors as described above, it may be interesting to examine precisely the effect of cognitive load and social preferences on the nature of preferred restructuring decisions. Cognitive load is retained because it is described in cognitive psychology as being related to an individual's performance in making decisions in a complex context. More specifically, cognitive load captures the effect of a complex situation characterized by an increase in the amount of information to be managed and the constraints during a given decision-making task (Paas et al. (2003)). Second, social preferences, which represent an interpersonal factor that forces an individual to consider the consequences of his or her decision on others, is relevant for understanding managerial preferences during restructuring, because restructuring decisions can have immediate or distant consequences on employees, for example. Moreover, although this factor is relevant for the analysis of

agency decisions, few studies have focused on the link between social preferences and agency decision making (ZHANG et al. (2020)). In the present study, we attempt to understand how these managers' internal factors affect their restructuring decision making. To this end, we study managers' preferences during a turnaround task by focusing on two alternative decisions attached to two families of restructuring measures. The first one is the massive layoff which is a choice in favor of cost reduction in organizational restructuring, while the second one is the increase of debt in financial restructuring in order to increase the financial surface. Due to the complexity of the situation and diverging interests, we assume that the two decision choices do not necessarily lead to positive consequences, and in fact lead to a dilemma for the decision maker.

To investigate the effect of the cognitive load caused by the distress situation on managers' restructuring preferences, we conducted a controlled experiment manipulating managers' cognitive load and measuring its effect on restructuring preferences. The decision-making task was constructed as a lottery with the two choices presented above (massive layoff and debt increase). In our experiment, we asked a group of managers to perform this lottery task while under cognitive load as measured by a 3x3 matrix of complex points occupying working memory (Neys (2006)), while another group performed the same task without being under cognitive load. The lottery contained an optimal point where moving from the first choice (layoff) to the second choice (increase in debt) is optimal. This point is defined by referring to the Sharpe ratio which is the decision criterion that is supposed to guide the manager's preferences. We also presented a series of other tasks, including the one aimed to measure the respondents' social preferences, BIS/BAS, risk aversion, etc. Social preferences as a natural personality trait of managers were measured through the task proposed by Murphy et al. (2011). Respondents were asked to choose between a monetary allocation they wished to retain, knowing that for each choice, a third party receives a given allocation different from the one the respondent wished to receive (for more details, see Murphy et al. (2011)).

As a result of the experiment, we found that, on average, cognitively loaded managers prefer to layoff large numbers of employees rather than increase the debt level of the financially distressed company. And prosocial managers behave exactly in the opposite way, i. e. they avoid on average massive layoffs as a solution to financial distress. However, no evidence is found when we test whether prosocial managers under cognitive load have different turnaround decision preferences. When analyzing the moral judgment rules followed by managers in making their decisions, we find no link between social preferences and the moral judgment rules followed by managers when we do not distinguish between cognitively loaded and non-cognitively loaded managers. In contrast, we find that prosocial managers under cognitive load are less likely to follow the ethical rule of moral judgment. These results do not support previous studies that suggest that cognitive distortions lead individuals to adopt the deontologic rule. Furthermore, managers showing fun-seeking orientation in the BAS system more often choose massive layoffs rather than increasing debt. And lastly, Risk aversion in this dilemmatic context has no effect on decision making according to our results. The rest of the paper is organized as follows. After this introduction, we present the hypotheses to be tested. We then present the methodology followed by the results section, and finally we present the conclusion section.

2 Hypothesis development

2.1 The effect of cognitive overload on restructuring decision preferences

The cognitive load describes the burden that performing a particular task places on an individual's cognitive system (Paas et al. (2003), p. 64). Since cognitive information processing capacity is limited, cognitive distortions are possible situations for decision makers (Abatecola and Cristofaro (2018)). In the present study, we argue that this variable would have a role to play in the outcome of a reorganization of the company to get it out of financial distress. Several studies have analyzed before us the possible effects of cognitive load on a number of variables. This is the case for studies that argue that cognitive load increases the risk aversion of decision makers for example (Whitney et al. (2008); Benjamin et al. (2013); Gerhardt (2013)). A cognitively loaded manager is likely to avoid making risky decisions. But there remain some grey areas about the effect of cognitive load with a number of other variables such as patience before a given action (Franco-Watkins et al. (2010)). Similarly Benjamin et al. (2013) finds that cognitive load does not increase the tendency to act impatiently. Whereas Getz (2013) argues that cognitive load increases individuals' impatience. In addition to these effects, cognitive load is indicated to have an impact on how they make their decision. Some authors simply state that cognitive load causes individuals to act in less sophisticated ways, particularly in games like the prisoner's dilemma (Sarah R et al. (2015); Allred et al. (2016); Carpenter et al. (2013); Deck and Jahedi (2015)). Other authors argue that cognitive load leads individuals to act randomly (Franco-Watkins et al. (2010)). With respect to allocation decisions, cognitively loaded individuals make different decisions than those who are not cognitively loaded (Cornelissen et al. (2011); Schulz et al. (2014)). Furthermore, they show poorer performance on lottery tasks (Hinson et al. (2002)). In order to make our contribution and shed more light on the effect of cognitive load, we aim to test how cognitive load affects managers' preferences towards restructuring decisions. We recall that the choice of cognitive load as an explanatory variable was dictated by the context of financial distress. Situational variables are indeed indicated as having a significant effect on the outcome of reorganization (see in particular Francis and Desai (2005)). However, we restrict the recovery choices to two types of choices to simplify the experiment. One is organizational restructuring, which consists of massive layoffs to reduce costs, and the other is financial restructuring, which consists of increasing the level of debt to increase the firm's financial strength, but at greater risk. In addition to the context of financial distress, which is already a source of cognitive load, both turnaround solutions contain an element of cognitive load in themselves because they can lead to a dilemma for the decision-maker. A decision to increase the company's debt may have consequences for the manager's career or for the company's future because of conflicts between influential residual claimants (shareholders and creditors) or with less influential residual claimants (employees for example). A massive layoff decision may have consequences for the manager at the personal level (loss of job or incentives), or it may lead to a conflict with the employees (Daigle and Maloney (1994); Cappelen et al. (2019)). Moreover, this decision may affect the productivity of the company in general (Johnson (1996)). It is also a difficult

solution because it implies that a significant number of employees may lose their jobs. However, it remains the easy solution for the manager who wants to avoid the severe sanctions of influential residual claimants. In order to analyze the effect of cognitive load on preferences given the above elements, we can then formulate the following hypotheses:

H1. Cognitive load leads managers to prefer massive layoff solutions during a turnaround task.

2.2 The Social Value Orientation and manager's restructuring decisions preferences

When trying to better understand the factors influencing managers' preferences during a restructuring task, the consideration of interpersonal traits can be of great importance since these decisions have consequences for the manager himself, but also for others (employees and stakeholders of the company). Social preferences are selected as the factor measuring the manager's interpersonal traits, through the Social Value Orientation variable. This variable refers to the social preferences of individuals when they have to allocate resources to themselves and to others in an interdependent context (McClintock (1978)). Based on social psychology, social values may be an important factor in determining preferences for restructuring decisions. Social psychological explanations are advanced in terms of conscious and unconscious beliefs about the potential consequences of the decision maker's action (Gray and Bjorklund (2018)). Thus, managers who are aware or unaware of the consequences of their actions on employees in particular or on the firm in general may have different restructuring preferences regardless of contextual elements. ZHANG et al. (2020) demonstrated that individuals sensitive to social values show similar risk-taking and sensitivity to potential gains and losses when making decisions for strangers, while those who are not sensitive to social values show more tolerance for risk-taking and less sensitivity to the gains and losses of others. In the present study, it can be expected that managers displaying strong social preferences will be able to avoid massive layoff decisions. Also based on the results of ZHANG et al. (2020), managers with strong social preferences will not be reluctant to increase the firm's level of debt even when they are aware that it leads to the increase of the firm's risk of bankruptcy, as they are more risk tolerant.

H2: In general, social value oriented managers avoid layoff decisions and prefer decisions to increase debt during restructuring.

2.3 The rules of moral judgment followed by prosocial managers

Following the analysis of the cognitive load effect and the social preferences effect on restructuring preferences, the question arises to know which rule of moral judgment is followed by managers. Moral judgment is defined as the evaluation of the moral character of a situation, of an action by applying moral rules, i.e. modes of conduct that one is entitled to expect from members of one's group and that one is asked to implement (Piolat and Latchimy (2013)).

Following the dual-process approach to moral judgment, the literature distinguishes two rules of moral judgment: the utilitarian rule and the deontological rule (Greene (2012); Greene et al. (2001); Greene et al. (2004)). The first rule refers to emotional decision making, while the second refers to more reflective decisions requiring a reasoning effort. In the present study, corporate restructuring decisions may have moral implications for the decision maker insofar as the different decision alternatives studied have consequences for the employees at the individual level and for all the stakeholders of the company at the collective level. In the simplified experimental design of the present study, the manager has the choice between laying off a large number of employees or increasing the risk of bankruptcy of the whole company by increasing its level of debt. The moral implications of these decisions are all the more difficult to manage for the manager as they represent a dilemma. Neither alternative guarantees a successful turnaround, as empirical studies have shown [citation]. In such a situation, the question of which judgment rule managers follow in making their decision is even more relevant when analyzed by distinguishing between the personality traits of social value-oriented managers (broadly speaking, prosocial managers) and those that are not social value-oriented. When a manager has a social value oriented personality trait, one can logically expect his intuitive decisions to reflect this sensitivity to social values, i.e. acting under system 1, the manager will systematically avoid decisions that have an immediate negative consequence on employees.

H3: Ceteris paribus, social value-oriented managers make in general restructuring decisions by following the deontological rule of moral judgment.

Furthermore, in order to better understand the factors influencing managerial decision preferences during a restructuring task, we are interested in the effect of cognitive load on individuals' moral judgment. Indeed, cognitive load is described as affecting utilitarian judgment (Greene et al. (2008)). The study of this link is all the more interesting since utilitarian moral judgments during decision making are described by some authors as not necessarily requiring cognitive effort, whether the moral transgression is weak (Kahane et al. (2012)), or strong (Trémolière and Bonnefon (2014)). It is possible to think that being subject to cognitive load is not necessarily succeptible to affect the manager's ability to follow an utilitarian rule of judgment. Thus, when faced with a decision involving layoffs, a manager would on average follow utilitarian reasoning. It should be noted, however, that these studies do not distinguish between individuals according to, for example, personality traits such as sensitivity to social values. In the present study, we take this distinction into consideration. Our goal is to understand whether in the restructuring task where the choice is between laying off employees or increasing the risk of the company, managers with a social value orientation and a cognitive load still follow the utilitarian rule.

H4: Among social value-oriented managers, those under cognitive load tend to follow the utilitarian rule of moral judgment.

3 Methodological design

3.1 Experimental design

A total of 260 subjects participated in the experiment. The experiment was programmed in Qualtrics and conducted online via Prolific in one session per participant. The survey was collected three times. The target group of decision makers was a group of respondents defined as current or former managers. All respondents were from the United Kingdom and the United States. The survey consisted of seven main sections. The first section included an attention test question, as participants are not always attentive to instructions and do not always follow them. We followed Oppenheimer et al. (2009) to incorporate the Instruction Manipulation Control (IMC) which is supposed to reduce noise and increase the validity of the collected data. Positioning this question at the beginning of the survey is recommended, in order to increase respondents' attention during the experiment. Participants who did not show enough attention were eliminated from the session, with the possibility of returning for a new session. This technique also increases the validity of the data collected (see Oppenheimer et al. (2009)). The second section involved the manipulation of the cognitive load variable. In a randomized fashion, one group was subjected to the cognitive load, while another group was not.

We followed Neys (2006) for the mental load manipulation which uses the "complex dot pattern" to manipulate the cognitive load. For the group under cognitive load, we presented a complex matrix of black dots for 850 milliseconds, asking participants to remember the exact position of each. For the group that was not subjected to the experimental manipulation, no matrix was presented. For the group that was subjected to the manipulation, we asked them to reproduce the exact location of the points memorized in the matrix after performing the main restructuring decision-making task. The third section discusses the main decision-making task of this study. The decision-making is conducted as a lottery between two possible alternatives: layoff and debt increase. Our dependent variable is derived from different switching points made during this task. The discriminating criterion that allows the decision maker to switch from the first alternative to the second is the Sharpe ratio. In the fourth section, respondents were given a risk preference elicitation test. We replicated the tasks from Dohmen et al. (2011), and used also by Riedl and Smeets (2017). The fifth section contained the measurement of the SVO variable that we used to measure manager's social preferences. This task was taken from the study by Murphy et al. (2011). The sixth section involved assessing manager's BIS and BAS, while the final section contained socioeconomic and demographic measures. Respondents were offered a monetary incentive to participate in this study, but no monetary incentive was offered for any of the measures used in this study. The sessions lasted an average of 12 minutes.

3.2 The experimental task of turnaround decision making

Restructuring measures implemented by the manager may ignore the distinction between transitory cash flow problems and structural problems, and focus excessively on downsizing due to pressure from influential residual claimants. Downsizing may even be an end in itself for organizational restructurings (Bow-

man et al. (1999)). The decision-making task studied then presents massive layoffs as the first alternative available to the manager. The decision to downsize is often present in the context of organizational restructurings that focus on cost reduction and an immediate impact on the discounting cash-flow (DCF) while keeping the firm's financial structure intact. Precisely for these reasons, shareholders and creditors (who make up the influential group of residual claimants) are in favor of this solution because it has an immediate impact on the DCF. In LBO firms where private equity funds are involved, restructuring often has negative economic and social consequences (Wilson and Wright (2013)). While for residual claimants massive layoffs may be preferable, the manager's preference for this turnaround solution is not clear, especially in LBO firms. Firstly, because on the one hand the financial incentive of the manager of the LBO firm may lead him to take a position for the shareholders. Second, because the manager may be aware that downsizing may have an impact on the work motivation of employees (thus increasing the bankruptcy risk anyhow) (Ashta et al. (2005)), or because of the moral judgement rule followed by the manager, which may force prosocial managers to avoid solutions consisting in massive layoffs.

The second alternative in the decision-making task presented in this study is that of increasing debt. This decision is part of financial restructuring and usually refers to changes in dividend policy or capital structure. It is mainly aimed at reducing the pressure on payments by using equity or debt-based strategies. Debt-based strategies include interest adjustment, debt maturity or debt/equity ratio (Koh et al. (2015), p. 20). The decision to take on additional debt assumes that the distressed firm still has the positive net present value projects. However, due to the problems of underinvestment (Myers (1977)) and that of the disciplinary effect of debt (Jensen (1986)), this second alternative also informs the complexity of the decision context faced by the firm's leader. The problem of underinvestment arises because a disproportionate share of the economic gain accrues to the pre-existing financial claimants (especially the oldest). In LBO companies, the restrictive clauses of the existing debt instruments do not allow this problem to be easily resolved, and imply more complexity in the decision-making context.

3.3 Dependent variable

Based on the main decision making task to turn around the financially distressed firm, we defined a dependent variable named Switch (Sw). This variable corresponds to the switch point from the first decision (massive layoff) to the second decision (increase of the debt). Since the decision-making task was constructed in such a way that it would be rational at a given moment to switch from the massive layoff to the debt increase, there was an indifference scenario where the decision-maker would be indifferent between the massive layoff and the debt increase decision. This indifference scenario is defined according to a discrimination criterion namely the inverted Sharpe ratio. Knowing that managers' performance is not only evaluated in terms of maximizing return, but also in terms of minimizing risk, the inverse Sharpe ratio was used as the main criterion to take into account both risk and return when making their decision (Sharpe (1994)). The decision task contained 13 scenarios, and each of these could be a switching point for the manager depending on his or her preferences. However, the indifferent switching point was set in line 7. Ceteris paribus, it

was optimal for all managers to prefer the decision (2) to increase debt to the decision (1) to make a massive layoff from line 8.

3.4 Independent variables

3.4.1 Cognitive load

Several research studies argue that measures of cognitive ability are positively related to measures of working memory capacity (Conway and Huffcutt (2003); Oberauer et al. (2005)). Thus, approaches to measurement define cognitive load as an indicator of working memory resources during task performance (Salden et al. (2006)). Allred et al. (2016) defines working memory as the cognitive resources available for temporary storage of information for use in decision making. The manipulation of cognitive load is then achieved by occupying the subject's working memory (Allred et al. (2016)) following the "dual-task paradigm" (Esmaeili Bijarsari (2021)). According to this approach, performance on a secondary task performed alongside a primary task provides information about the cognitive load imposed by the primary task (see Chandler and Sweller (1996); Brünken et al. (2010)). We manipulated the cognitive load variable by taking up the task of remembering and reproducing black dots in a matrix (Neys (2006)). This is a classic spatial storage task as in previous studies (Bethell-Fox and Shepard (1988), Miyake et al. (2001)). The cognitive load manipulation variable (named "CL") is a dummy variable taking the value of 1 if the respondent is part of the group that was subjected to the cognitive load, and 0 if not.

In this study, a 3 x 3 matrix containing 4 dots was presented for 850 ms. Participants memorized the pattern and were asked to reproduce it afterwards. Some individuals may have a large memory capacity (Neys (2006)). We asked them to reproduce the pattern after performing the lottery task. We then constructed a score by assigning a value of 1 to each correctly filled cell and 0 to each incorrectly filled cell. We then summed all correctly filled cells to obtain the "Score Matrix" variable (named "SM") related to the score obtained by respondents in the cognitive load group.

3.4.2 Social preferences

We used the task proposed in Murphy et al. (2011) to assess respondents' social preferences. Using a series of six items, the respondent was asked to choose a certain amount of money that they wished to keep knowing what the other would receive as a result of their choice. As defined by (Murphy et al. (2011)), the SVO variable is measured by the arctangent of the ratio of the allowance the respondent decides to leave to others to the allowance the respondent decides to keep in each item. The use of the arctangent enables the SVO variable to be expressed in terms of the degree of social sensitivity. Respondents can be classified into altruistic, prosocial, individualistic, and competitive individuals, with the altruistic being the individual with the highest score or degree of social sensitivity (for more details, see Murphy et al. (2011)). In the first analysis, we used the raw measure of the SVO variable without distinguishing between the different categories defined in Murphy et al. (2011). Then, in the second analysis we transformed the SVO variable into a dummy variable. We were particularly interested in altruistic and prosocial managers in particular to study

the judgment rules followed by these managers. This binary variable was given the value "1" when managers were prosocial or altruistic, and the value "0" in the other cases.

3.4.3 Control variables

Based on the existing literature and to mitigate omitted variable bias, this study controls for risk aversion (RA), behavioral inhibition system (BIS), behavioral activation system (BAS), and socioeconomic and demographic variables. Respondents were subjected to the risk-elicitation task developed in Dohmen et al. (2011) based on Holt and Laury (2002). The same measure was adopted in reference Riedl and Smeets (2017). Respondents were asked to choose between a certain amount of money and a risky lottery choice from 20 different scenarios. The risky lottery had a 50/50 chance of winning $ 300 and a 50/50 chance of winning nothing. In the first line, the amount was $ 0, but then had to increase by $ 10 with a maximum of $ 190 in the 20th scenario. The point at which the lottery crossed the certain amount was defined as the respondent's "risk preference value." A higher value indicates a strong risk preference. The BIS/BAS measure was provided from Carver and White (1994). Respondents were asked a series of 24 questions related to the Behavioral Inhibition and Behavioral Activation Systems measure. Finally, respondents were asked their gender, age, education level, and whether they had passed any of the professional finance and accounting designation exams.

4 Results

In this section, we test our hypotheses. Before that, we present the descriptive statistics and the correlation matrix. Next, we present the results for the hypothesis of the effect of cognitive load on the choice of restructuring decision. Subsequently, we examine the effect of social preferences on the nature of the decision made. Finally, we discuss the moral judgment rule followed by prosocial managers.

4.1 Descriptive statistics

This section presents the post-collection descriptive statistics in table 1.

We collected 260 responses to our experiment. After the passage and obtaining of the data, we had to eliminate a certain number of respondents whose answers could not be exploited because they were incoherent according to the decision criterion (inverted Sharpe ratio) for the dependent variable "Switch" (Sw). After eliminating the incoherent responses, the total number of respondents was 222 (85 percent of respondents). These respondents performed well overall on the managerial decision-making task, with a mean switch score very close to the standard switch point (according to the Sharpe ratio), which corresponds to 7.63. The standard deviation is 3.54. The minimum point of the Switch begins at 1 corresponding to the choice of managers who avoided any massive layoffs as a solution to the company's problems. The variable "SVO" measures the social preferences of managers. On average, the managers who passed the experiment are at 13.08°. This means that, on average, the managers who participated in this experiment are in the individualistic category

Table 1: Descriptive statistics

Statistic	N	Mean	St. Dev.	Min	Max
Sw	222	7.63	3.54	1	14
SM.4dots	107	3.22	1.01	1	4
RA	217	3.47	2.71	0	14
SVO	222	27.37	13.08	−13.69	52.91
BAS.D	222	9.23	2.44	4	16
BAS.FS	222	8.86	2.20	4	15
BAS.RR	222	8.82	2.24	5	18
BIS	222	2.88	3.76	−4	14
LBOPE	222	0.08	0.27	0	1
Age	222	39.68	10.40	24	65
EL	222	1.43	0.65	0	3
EMEFA	222	0.18	0.39	0	1
EMBS	222	0.39	0.49	0	1
PC	222	0.18	0.39	0	1
ExE	222	0.38	0.49	0	1
ExCS	222	6.69	2.33	0	10
Dur.min	222	11.72	5.49	4	39

Note : The table 1 contains statistics on different variables in our study. The first variable is our dependent variable named "Switch". Following this, the table presents our independent variables : Score matrix for the groupe under cognitive load (SM.4dots), Risk aversion (RA), Social Value Orientation (SVO), Behavioral Activation System (BAS) which includes three components: Drive for BAS.D, Fun Seeking for BAS.FS and Reward Responsiveness for BAS.RR. The table also contains the following variables : Behavioral Inhibition System (BIS), Leverage BuyOut Prior Experience (LBOPE), Age, Education level (EduLev), Education Major in Economics (EME), Education Major in Economics, Finance and Accounting, Education Major in a Business School option (EMBS), Professional Certification (PC), Experiment experience (ExE), Experience Comprehension Score (ExCS), and Experiment Duration minutes (Dur.min).

(SVO value between -12.04.48° and 22.45° according to Murphy et al. (2011)). The standard deviation of managers' social preferences is 13.08 The minimum is -13.69 and the maximum is 52.91. Regarding the control variables, the behavioral systems of the managers under this experiment show a mean of 2.88 and a standard deviation of 3.76 for the BIS. The different components of the BAS show a mean of 9.23 and a standard deviation of 2.44 for the BAS.D, a mean of 8.86 and a standard deviation of 2.20 for the BAS.FS and finally a mean of 8.82 and a standard deviation of 2.24 for the BAS.RR. For the RA variable, 217 respondents performed well on the risk aversion measurement task. The slightly lower response rate is due to respondents who provided incoherent responses to the task to measure risk aversion. The average RA is 3.47, with a standard deviation of 2.71. 8 percent of the managers had previous experience with an LBO. The average age of the managers is 39 years, and the average education level is between undergraduate and graduate.

4.1.1 The Cognitive load manipulation check

Approximately 50% of randomly selected respondents were under cognitive load (107 respondents). Our results were close to those obtained by Neys (2006). Results for the dot memory task indicated that the task was performed properly. The mean number of correctly localized dots was 3,22 (SD = 1,01) for the group who was under cognitive load. In Neys (2006), the mean number was 3,54 (SD = 0,51) for the complex four-dot patterns in the high load condition. In our study, overall, about 81% of the four-dot patterns were reproduced correctely. In Neys (2006), 89% of the four-dot patterns were reproduced correctely.

4.2 Correlation matrix

The results of the correlations between the different variables are presented in the first analysis. However, our focus is essentially on the different correlations with the dependent variable "Sw".

Correlation matrix

	Sw	CL	RA	SVO	BAS.D	BAS.FS	BAS.RR	BIS	Sex	Age	EL	EMEFA	EMBS	LBOPE	PC	ExE	ExCS	Dur.min	AltM	Sw0	Sw1	Sw3
Sw																						
CL	0.175 *(.010)*																					
RA	0.001 *(.992)*	0.055 *(.419)*																				
SVO	-0.138 *(.042)*	0.025 *(.711)*	-0.035 *(.608)*																			
BAS.D	0.003 *(.960)*	-0.074 *(.275)*	0.073 *(.284)*	0.244 *(<.001)*																		
BAS.FS	0.128 *(.060)*	-0.050 *(.464)*	0.098 *(.149)*	0.122 *(.072)*	0.541 *(<.001)*																	
BAS.RR	-0.015 *(.823)*	-0.024 *(.731)*	0.142 *(.037)*	0.115 *(.091)*	0.609 *(<.001)*	0.439 *(<.001)*																
BIS	-0.015 *(.828)*	0.037 *(.590)*	0.054 *(.426)*	-0.159 *(.019)*	-0.142 *(.037)*	-0.171 *(.012)*	0.077 *(.258)*															
Sex	-0.002 *(.977)*	-0.013 *(.855)*	-0.016 *(.817)*	-0.117 *(.084)*	-0.055 *(.423)*	-0.116 *(.089)*	0.098 *(.150)*	0.436 *(<.001)*														
Age	-0.015 *(.823)*	0.017 *(.799)*	-0.004 *(.954)*	0.065 *(.344)*	0.221 *(.001)*	0.088 *(.196)*	0.178 *(.009)*	0.099 *(.145)*	0.149 *(.029)*													
EL	0.017 *(.798)*	0.126 *(.063)*	0.060 *(.383)*	-0.050 *(.465)*	-0.019 *(.777)*	-0.042 *(.540)*	-0.077 *(.257)*	-0.024 *(.725)*	-0.048 *(.484)*	-0.007 *(.920)*												
EMEFA	0.018 *(.790)*	0.051 *(.454)*	0.038 *(.580)*	0.026 *(.700)*	-0.115 *(.091)*	-0.125 *(.066)*	-0.089 *(.191)*	0.029 *(.667)*	0.089 *(.193)*	0.045 *(.507)*	0.012 *(.862)*											
EMBS	0.057 *(.406)*	0.064 *(.352)*	0.060 *(.379)*	-0.120 *(.079)*	-0.128 *(.059)*	-0.142 *(.037)*	-0.160 *(.018)*	0.076 *(.265)*	0.100 *(.144)*	-0.065 *(.344)*	0.156 *(.022)*	0.589 *(<.001)*										
LBOPE	0.131 *(.054)*	0.027 *(.697)*	0.019 *(.785)*	-0.018 *(.796)*	-0.215 *(.001)*	-0.150 *(.027)*	-0.087 *(.203)*	0.097 *(.155)*	0.108 *(.112)*	-0.054 *(.432)*	-0.056 *(.413)*	0.042 *(.536)*	-0.020 *(.765)*									
PC	-0.034 *(.623)*	-0.067 *(.327)*	-0.063 *(.355)*	-0.027 *(.689)*	-0.129 *(.057)*	-0.121 *(.076)*	-0.085 *(.211)*	-0.017 *(.800)*	0.039 *(.569)*	-0.026 *(.700)*	-0.021 *(.753)*	0.387 *(<.001)*	0.196 *(.004)*	0.210 *(.002)*								
ExE	-0.068 *(.320)*	-0.089 *(.192)*	0.102 *(.133)*	0.215 *(.001)*	0.059 *(.385)*	-0.028 *(.682)*	0.061 *(.374)*	0.081 *(.237)*	0.101 *(.139)*	0.100 *(.142)*	0.082 *(.232)*	0.007 *(.924)*	0.044 *(.519)*	0.056 *(.414)*	0.012 *(.857)*							
ExCS	0.104 *(.127)*	-0.090 *(.187)*	0.003 *(.965)*	-0.132 *(.051)*	-0.199 *(.003)*	-0.132 *(.053)*	-0.215 *(.001)*	0.159 *(.019)*	0.219 *(.001)*	-0.053 *(.434)*	0.125 *(.065)*	0.022 *(.745)*	0.107 *(.115)*	0.071 *(.300)*	0.045 *(.510)*	0.044 *(.523)*						
Dur.min	-0.070 *(.307)*	0.005 *(.940)*	0.094 *(.169)*	-0.010 *(.886)*	-0.129 *(.057)*	-0.134 *(.049)*	-0.090 *(.187)*	0.178 *(.009)*	0.147 *(.031)*	0.033 *(.626)*	0.071 *(.298)*	0.049 *(.473)*	0.085 *(.211)*	0.014 *(.835)*	0.086 *(.209)*	0.078 *(.254)*	0.116 *(.088)*					
AltM	-0.148 *(.029)*	0.029 *(.669)*	-0.042 *(.543)*	0.900 *(<.001)*	0.260 *(<.001)*	0.105 *(.124)*	0.104 *(.128)*	-0.143 *(.035)*	-0.124 *(.069)*	0.042 *(.534)*	-0.058 *(.399)*	0.018 *(.794)*	-0.100 *(.142)*	-0.034 *(.619)*	-0.044 *(.517)*	0.157 *(.021)*	-0.101 *(.138)*	-0.041 *(.548)*				
Sw0	0.085 *(.211)*	0.061 *(.368)*	-0.036 *(.598)*	0.064 *(.350)*	0.033 *(.630)*	0.024 *(.720)*	-0.074 *(.276)*	-0.090 *(.187)*	0.011 *(.876)*	-0.042 *(.535)*	-0.125 *(.067)*	0.100 *(.140)*	-0.064 *(.345)*	-0.013 *(.846)*	0.025 *(.713)*	0.041 *(.552)*	0.032 *(.635)*	-0.064 *(.346)*	0.096 *(.160)*			
Sw1	-0.679 *(<.001)*	-0.147 *(.030)*	-0.037 *(.591)*	0.045 *(.506)*	-0.020 *(.768)*	-0.112 *(.100)*	0.053 *(.436)*	0.017 *(.807)*	-0.029 *(.666)*	0.065 *(.344)*	0.033 *(.624)*	-0.056 *(.411)*	-0.020 *(.769)*	-0.051 *(.450)*	0.010 *(.881)*	-0.013 *(.845)*	-0.103 *(.130)*	0.046 *(.496)*	0.047 *(.492)*	-0.686 *(<.001)*		
Sw3	0.602 *(<.001)*	0.072 *(.291)*	0.088 *(.197)*	-0.135 *(.047)*	-0.024 *(.731)*	0.085 *(.213)*	0.045 *(.508)*	0.105 *(.122)*	0.017 *(.808)*	-0.011 *(.877)*	0.135 *(.047)*	-0.078 *(.254)*	0.109 *(.109)*	0.073 *(.287)*	-0.045 *(.509)*	-0.041 *(.545)*	0.065 *(.341)*	0.039 *(.572)*	-0.180 *(.008)*	-0.639 *(<.001)*	-0.121 *(.075)*	

Computed correlation used pearson-method with listwise-deletion.

Note : The table 4.2 presents the differents correlation coefficients. The different p-values are listed between paratheses below the correlation coefficient. To facilitate the reading of the table, the first variable is our dependent variable, named "Switch" and noted (Sw). Then, independent variables follow in order : Cognitive Load (CL), Risk aversion (RA), Social Value Orientation (SVO), Behavioral Activation System (BAS) which includes three components: Drive for BAS.D, Fun Seeking for BAS.FS and Reward Responsiveness for BAS.RR. The table also contains the following variables : Behavioral Inhibition System (BIS), Sexe, Age, Education level (EduLev), Education Major in Economics, Finance and Accounting, Education Major in a Business School option (EMBS), Leverage BuyOut Prior Experience (LBOPE), Professional Certification (PC), Experiment experience (ExE), Experience Comprehension Score (ExCS), Experiment Duration minutes (Dur.min), Altruistic Managers (AltM), Switch around the optimal Switching point according to the Sharpe ratio (Sw0), Switch at the bigining of the experiment (Sw1) and Switch at the end of the experiment (Sw2).

We find mainly two variables correlated with our dependent variable "Sw". First, there is a significant positive correlation between the "CL" variable and the "Sw" variable. This suggests that when a manager is under cognitive load, he will stay longer on the decision to lay off before switching to the decision to increase the firm's debt in order to turn it around. We also find a significant and negative correlation between the SVO variable and our dependent variable "Sw". This means that when managers have social preferences, they prefer to increase the firm's debt rather than to lay off large numbers of employees. We find no correlation between the dependent variable "Sw" and the other variables in this study.

4.3 The effect of cognitive load state and social preferences on the switch in restructuring decision

In this section, we test two hypotheses, namely the effect of cognitive load and the effect of social preferences on managers' restructuring choices when turning around a financially distressed firm.

Table 2 presents the results of regressions on the switch variable. Model 1 presents the results of the regression with only our variables of interest. Then, we integrate successively the different control variables in models 2, 3 and 4. The significance of the overall model does not show a significant change between model 1 and 4, although model 3 is the best model with respect to the R^2 which is 7 percent. We find a positive and significant coefficient at the 1 percent level of the cognitive load (CL) variable in our different regressions. More importantly, this result remains stable in all regression models. That is to say, the inclusion of other characteristics has almost no effect on the link between the state of cognitive overload and the choice of restructuring. Thus, cognitively loaded managers tend to make more massive layoff decisions than non-cognitively loaded managers. This result validates our hypothesis H1. We also find a negative and significant effect of the SVO variable at the 5% statistical significance level. In line with our expectations, social value oriented managers avoid massive layoff decisions in order to turn around the distressed company. This result confirms our hypothesis H2.

Furthermore, we find a positive and significant effect at the 5 percent level of the variable BAS.FS in the different regression models. Reward-sensitive and fun-seeking managers also fire more, as the coefficient for BAS.FS is positive and significant at the 5 percent level. The other components of the BAS do not show a significant coefficient. Similarly, the BIS has no effect on restructuring decision choices. Regarding the other control variables, the RA variable does not significantly affect the restructuring decision. But the fact of having experience in LBOs represented by the variable LBOPE displays a positive and significant coefficient at the 5 percent threshold. This result shows how the awareness of an already very high bankruptcy risk and the knowledge of the implications of increasing debt lead managers to choose massive layoffs significantly more often than increasing debt.

Table 2: Regressions analysis on the Switch

	Dependent variable:			
	Sw			
	(1)	(2)	(3)	(4)
CL	1.342***	1.309***	1.394***	1.361***
	(0.464)	(0.461)	(0.462)	(0.478)
SVO	−2.403**	−2.530**	−2.406**	−2.451**
	(1.033)	(1.039)	(1.037)	(1.089)
BIS	−0.017	−0.016	−0.033	−0.028
	(0.063)	(0.064)	(0.065)	(0.071)
BAS.FS	0.238**	0.312**	0.310**	0.303**
	(0.107)	(0.126)	(0.126)	(0.128)
BAS.RR		−0.124	−0.087	−0.079
		(0.135)	(0.136)	(0.139)
BAS.D		0.046	0.054	0.060
		(0.134)	(0.134)	(0.138)
RA		−0.036	−0.040	−0.047
		(0.086)	(0.086)	(0.088)
LBOPE		2.014**	1.967**	2.105**
		(0.878)	(0.875)	(0.907)
ExCS			0.178*	0.189*
			(0.104)	(0.109)
PC				−0.577
				(0.667)
EMEFA				0.490
				(0.665)
EduLev				−0.096
				(0.365)
Age				−0.002
				(0.023)
Sexe				−0.149
				(0.537)
ExE				−0.092
				(0.505)
Constant	6.075***	6.095***	4.494***	4.890***
	(1.132)	(1.246)	(1.556)	(1.862)
Observations	222	217	217	217
R^2	0.072	0.103	0.116	0.120
Adjusted R^2	0.055	0.069	0.077	0.055
Residual Std. Error	3.440 (df = 217)	3.375 (df = 208)	3.360 (df = 207)	3.400 (df = 201)
F Statistic	4.208*** (df = 4; 217)	2.990*** (df = 8; 208)	3.005*** (df = 9; 207)	1.835** (df = 15; 201)

Note: *p<0.1; **p<0.05; ***p<0.01

Note : The table 2 contains the different results of the regressions on the Switch in restructuring choice variable noted (Sw). The different variables represented in the table are as followed : Cognitive Load (CL), Social Value Orientation (SVO), Behavioral Inhibition System (BIS), the Fun Seeking component of the Behavioral Activation System (BAS.FS), the Reward Responsiveness component of the BAS (BAS.RR), the drive component of the BAS (BAS.D), Risk aversion (RA), Leverage BuyOut Prior Experience, Experiment Comprehension Score (ExCS), Professional Certification (PC), Education Major in Economics, Finance or Accounting (EMEFA), Education Level (EduLev), Age, Sexe and Experiment experience (ExE).

Table 3: VIF test

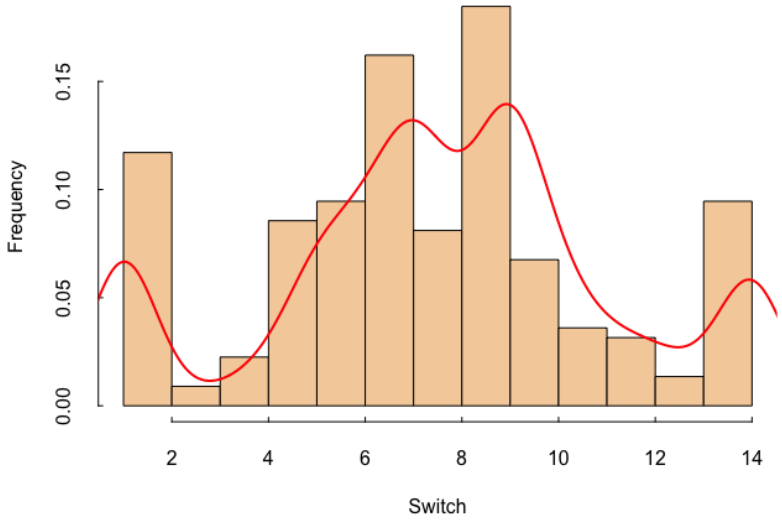
Statistic	N	Mean	St. Dev.	Min	Max
Tolerance	15	0.80	0.14	0.47	0.94
VIF	15	1.31	0.31	1.07	2.12

Note : The table 3 represents the summary of collinearity statistics of the different variables of our model 4. As on average, the tolerance is greater than 0, the VIF indicates that there is no issue of multicollinearity among the variables.

4.4 Moral judgement in restructuring decision-making

The decision-making task presented to the managers was designed as a dilemma. This dilemma is related to the fact that the manager's preferences for a restructuring decision have undesirable consequences, regardless of the decision taken ("massive layoff" or "increased debt"). In the case where the manager chooses to lay off employees, the personal moral discomfort may be significant, while if he chooses to increase the firm's debt, this decision may increase the firm's risk of bankruptcy. In the case of LBO firms, the increase in bankruptcy risk has internal and wallet-level consequences for the manager because of the increase in the anticipated cost of bankruptcy and the manager's high incentive level. Stakeholder pressure further increases the dilemma for the executive (e.g., employee union demands ([Liu, 2017]), pressure from other residual claimants with significant bargaining power). This dilemma situation and having moral consequences can easily be analyzed through the different types of moral judgment followed as advocated in the literature (Greene (2012)). We therefore ask whether moral judgment has a role to play in decision-making in the context of financial distress studied in this research. Studying this question will then allow us to answer our hypotheses 3 and 4 in the subsection 4.5. For this purpose, we can first examine how managers have globally made the decision to switch from the decision to lay off to the decision to indebt the company through a histogram of frequencies (see the figure 1).

Figure 1: Switch points distribution



Note : The figure 1 illustrates the frequency distribution of switching from choice 1 (layoff decision) to choice 2 (debt increase decision) by managers.

A visual examination of the frequency histogram of switching from the decision to lay off to the decision to take on additional debt indicates a breakdown

into three different groups displaying similar decision making behaviors. These differences in managerial behavior indicate that managers follow different rules when making turnaround decisions. A first group of managers who switch at the first scenarios, a second group of managers who switch much later towards the end of the lottery, and a group displaying a normal distribution around the normal switching point (considering the Sharpe ratio). The first group of managers therefore avoids massive layoffs at all costs, even though the Sharpe ratio, which serves as a decision criterion, indicates that the decision is in favor of a massive layoff. These managers follow the ethical rule of moral judgment, because they avoid endangering the lives of employees. They then immediately decide to increase the company's debt, regardless of the decision criterion (reverse Sharpe ratio). Managers following a deontological rule in their moral judgment make the restructuring decision by avoiding choices with immediate consequences for employees, even though the unions do not have significant bargaining power. The second group of managers, on the other hand, behaves in the opposite way. They postpone the decision to take on additional debt beyond the normal switching point according to the Sharpe ratio. These managers follow the utilitarian rule of moral judgment. Finally, the third group consisting of the bulk of the workforce decides to switch from redundancy to an increase in debt around the normal switch point (if we consider the Sharpe ratio decision criterion). These differences in managerial behavior may be an indication that managers follow different rules of moral judgment when making turnaround decisions. In particular, we analyze the behavior of prosocial and altruistic managers (namely ProS) versus the other categories to understand how morally sensitive managers differ from the other categories in making their decisions with moral implications.

4.5 Moral judgment rules of managers using logistic regression

In order to study the behavior of prosocial managers in depth, we split our dependent variable Switch into two subcategories. We then grouped in a first category those managers who switched from layoff to debt before reaching the standard switch point (only the switches in the first and second scenarios are considered), in a second category those who switched around the standard Switch point. The first variable is denoted "Sw01" and serves as a proxy for the ethical moral judgment rule. While the second variable is denoted "Sw02" and serves as a proxy for the utilitarian moral judgment rule. This allowed us to present a logistic regression to test whether social preferences increase the probability of switching before reaching the standard switch point or not.

Consistent with our hypothesis, the logistic regression results in Table 4 confirm that altruistic and prosocial managers (noted ProS) avoid restructuring solutions involving massive layoffs. In line with our results presented in the previous section, there is a high probability for altruistic and prosocial managers to switch earlier before reaching the standard Switch point. We find that in general altruistic and prosocial managers follow the deontological rule to define their preference between layoff and debts (positive relationship between Sw01 and ProS) (see ProS in model 2). Thus, if they are altruistics or prosocial, they have a high probability of switching from layoff to debt sooner. This result confirm our hypothesis H3. Studying the group of cognitively loaded managers,

Table 4: Logit analysis of the Switch

	Dependent variable:			
	Sw01		Sw02	
	(1)	(2)	(3)	(4)
ProS	0.342	0.657*	0.073	0.090
	(0.324)	(0.358)	(0.299)	(0.338)
ProS:CL		−0.679**		−0.036
		(0.342)		(0.322)
Constant	−0.960***	−0.960***	−0.342	−0.342
	(0.277)	(0.277)	(0.252)	(0.252)
Observations	222	222	222	222
Log Likelihood	−140.032	−138.018	−151.535	−151.528
Akaike Inf. Crit.	284.063	282.037	307.069	309.057
Note:				*p<0.1; **p<0.05; ***p<0.01

Note : The table 4 presents results of a logistic regression on the Switch different categories. Sw01 is the dummy dependent variable for the group of managers who switched from the massive layoff solution to the increase in debt before reaching the standard Switch point. Sw02 is the binary dependent variable for the group of managers who switched from the massive layoff solution to the increase in debt around the standard Switch point. This variable takes the value "1" for managers who decided to switch from layoff to debt around the standard switch point and "0" if not. Then, ProS is a dummy variable that represents prosocial and altruistic managers. It takes the value of "1" when the manager has reached an SVO score that can be classified as belonging to the prosocial or altruistic category and "0" if they belong to other categories (following the categorization of Murphy et al. (2011)).

we find that when they are altruistics or prosocial they are less likely to follow the deontological rule of moral judgment (see ProS:CL in model 2). However, this does not necessarily mean that they follow a utilitarian moral rule because we find no evidence that they are more likely to follow a utilitarian moral judgment (model 3 and 4). Thus, our hypothesis H4 is not confirmed by these results.

5 Conclusion

We demonstrate in this study how restructuring decisions in the context of a high probability of bankruptcy can be influenced by the cognitive state of the firm's manager and other managers trait of personality like social preferences. We focused on the study of the effect of cognitive overload on the manager's decision-making ability in a situation of high financial distress due to the pressure of the powerful group of residual creditors. The restructuring measures studied were presented in an experiment in the form of a lottery between the choices of massive layoff on the one hand and the increase of debt on the other. The findings of the present study are based on a controlled experiment in which we generate the behavioural aspect of cognitive overload through a measure validated in the literature. This measure consisted of the exposition of a group of respondents to a matrix of black spots in order to occupy their working memory. All respondents were then subjected to a series of scenarios in which they had to choose between the two possible choices of layoff and debt increase. It should be noted that this set of scenarios includes an indifference point after which the switch from choice 1 to choice 2 is optimal according to the Sharpe ratio criterion. In addition, we tested the effect of the SVO variable in order to verify whether the fact of being socially oriented affect the restructuring choices. Finally, we controlled for a series of variables such as risk aversion, BIS/BAS and finally the traditional socio-economic and demographic variables.

From the experiment involving respondents who have been or are currently managers, we find that when the manager's cognitive factors are affected by the particular context of bankruptcy risk, the restructuring managerial decision choices change. In particular, when we study the effect of cognitive load on the type of restructuring decisions, we find that managers under cognitive load tend to make cost-cutting restructuring decisions (downsizing restructuring decision). Thus, in the decision-making experiment presented to managers, those under cognitive load do not hesitate to lay off large numbers of employees rather than take on additional debt to turn the firm around. We explain this result by the balance of power between residual creditors. On the one hand, shareholders and creditors have strong bargaining power which allows them to exert strong pressure to preserve the value of their assets, while employees with weak bargaining power do not have any effective power to pressure the manager. However, when the social profile of the leader is studied, it is found that leaders who are sensitive to social values avoid cost-cutting restructuring (i.e massive layoff), whether they are cognitively overloaded or not. This is consistent with the notion of social preferences. Being sensitive to moral values does not seem to be affected by environmental conditions and power relations in a financial distress context.

Finally, we study the behavioural systems of inhibition (BIS) and activation (BAS) in order to investigate how the sensitivity to the sanctions or re-

wards affects the managerial decision making in a context of high probability of bankruptcy. The analysis of this dimensions is important for this paper because in the configuration of LBO firms, the incentive system put in place by private equity funds can have both types of consequences for the manager: either sanction through revocation, for example, when the manager's performance is poor, or reward through stock options, for example, when the manager has outperformed. Thus, a manager who is sensitive to the sanction will avoid offending the powerful residual creditors who have the power to fire him. Whereas a manager who is sensitive to reward will favour solutions that have an immediate impact on the DCF. Studying the BIS and BAS systems, we find that only reward sensitivity impacts managerial decision making. Specifically, fun-seeking managers are more likely to make decisions that increase DCF. i. e. they are more likely to choose to lay off employees than to increase the level of debt.

These results imply that the performance mechanisms emphasized, for example in LBOs, have their own limitations during periods of financial difficulty. This study shows that one of these limitations is related to cognitive distortions. Thus, financial incentives and debt discipline mechanisms are not always sufficient to make the firm efficient. And in the situation of financial distress, agency costs increase due to these cognitive distortions. The results of this study show, for example, that decisions to make massive layoffs as part of restructuring plans are not necessarily the result of rational analysis, but may stem from cognitive distortions caused by the decision-making context.

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