Financial versus Social Efficiency of Corporate Bankruptcy Law: the French Dilemma?♦

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Abstract

We study the French dilemma associated with court administered resolution of corporate financial distress of firms, in which bankruptcy courts have to combine both social efficiency (maintaining employment) and *ex post* financial efficiency (determining the best issue for financial distress, proxied here by the global recovery rate). We discuss this dilemma empirically, using a large sample of decisions of French commercial courts concerning the future of bankrupt firms (reorganization, sale as a going concern or liquidation). Addressing this dilemma, we discuss the determinants of bankruptcy courts' selection between rival offers in sales as a going concern. Finally, we evaluate the financial cost of the French pro debtor system through the recovery rates of various claimants. Our main results are: (1) French commercial courts actively work to protect employment by facilitating continuation and reducing the domino effects of bankruptcy. (2) the courts' choice between rival buyout offers confirms that social considerations prevail in the arbitration of bankruptcy courts. (3) Continuations through reorganization plans generate the highest recovery rates for all classes of creditors. (4) Contrary to the expected trade-off between social and financial efficiency, courts also enact measures to increase debt recovery once continuation has been chosen. However, for sales, recovery rates are inhibited by asset illiquidity and/or by the courts' attempt to promote a firm's continuation through sales at a low price.

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INTRODUCTION

Since the end of the twentieth century, numerous bankruptcy codes tend to shift toward more pro-debtor legislations. This is particularly true in Europe, where important countries – initially known for having quite pro-creditor systems – adopted several legal reforms introducing more debtor friendly rules. In particular, the United kingdom (common law) and Germany (German civil law) engaged major reforms going in such a direction. In the UK, Part 10 of the *Enterprise Act* (2002) interestingly specifies a new objective of the Law: "to facilitate company rescue" in addition to "produce better returns for creditors as a whole". In addition, since 2003, the former UK *Receivership* (a bank friendly procedure allowing a creditor – generally a bank – in possession of a floating charge, to appoint a receiver to protect his/her own interests) does not longer exist. In Germany, a similar trend is observed through the new bankruptcy code *Insolvenzordnung* (1994), which was put into practice since the 1st of January 1999. While the German legislation keeps prioritising the repayment of creditors, the new German code sets an additional derogatory procedure (*Insolvenzplan*), allowing for the continuation of activity: liquidation is not the sole possible outcome anymore, provided the value of the debtor's assets exceeds the level of the bankruptcy costs. Overall, even if debtors are less protected in these countries than in France, a country known for having adopted a pro-debtor view for a longer period of time (since 1967), this trend reflects in some extent the legislators' willingness to use bankruptcy as a tool to protect businesses and employment. Indeed, even if continuation may not reward creditors as much as liquidation, the pursuit of activity should preserve relatively more human resources than with piecemeal liquidation[5].

From that perspective, the case of France is of high interest, as French law is explicitly intended to save bankrupt firms in order to protect employment: upon comparing French bankruptcy procedure with other European legislations and the U.S., we find the following differences[6], which make the French code instructive to study regarding the economics of financial distress. First, the 1st article of the 1985 and 1994 French bankruptcy codes explicitly orders the various

[5] Yet, this trend does not mean the number of continuations is getting higher, compared to liquidations. On the contrary, in UK, Germany, and France, bankruptcy procedures end up with liquidation in more than 90% of cases. However, the quite recent change in the objectives of national laws means the institutional environment of default is evolving, which may finally affect the strategies, taking place in or out bankruptcy.

[6] See White (1996) for a more detailed comparison of U.S. and European countries.

objectives of the law as: firstly "safeguarding the business", then [2] "maintaining the firm's operations", and last [3] "discharging liabilities"[7]. Second, the decision-making process is fully centralized, as the commercial court has genuine enforcement power during the collective process: the bankruptcy judge decides the adoption of the reorganization plan (there is no voting procedure or veto power for stakeholders). Third, the French legislation offers the stakeholders a specific procedure dedicated to sales as a going concern, as an alternative way of continuing activity[8]. Last, since 1994, the French legal framework of bankruptcy has been improving prevention: this is coherent with the 1st article of the French law, prioritising the safeguarding of businesses. Practically, the ignition of alert procedures was facilitated since 1994 and some courts (especially in Paris) implemented prevention units ("*cellules de prevention-détection*") aiming at auditing the firm's managers when the court receives signals of difficulties. All these legal specificities show a voluntary legal bias in favour of the outcome that saves the most important part of the employees (social efficiency), rather than favouring the outcome which maximizes the value of the firm, that is the sum of all claims' market values (financial efficiency).

There are two major means of protecting some specific stakeholders. Either the law settles peculiar rules of collective decision making (vote), or grants some enforcement power to the Court. When a vote applies, the respective weights given to the different stakeholders and/or the possible deviations from the absolute priority order indirectly put some priority onto the final outcome (i.e. liquidation *vs*. continuation), as it affects the identity of the residual claimant (Blazy and Chopard (2004)). When the Court is entitled to enforce a solution, as in France, the orientation given by the law is of high importance, as this may affect the post-default renegotiation process. Yet, whatever the ways of the decision making (decentralized through a vote, of centralized, with the help of the Court), the adoption of a pro-debtor system (or, at least a shift towards it) stems from a trade-off between the capacity of the Law to help in pursuing more businesses, and the global cost incurred by the creditors, who finally have to bear the financial cost of continuations. From that perspective, two questions should be addressed. Question 1: *How a pro-debtor law can practically implement more continuations, in order to increase social*

[7] Weber (2005) explores the effects of this French legal priority set on agency problems between bankrupt firms and their debtholders. Weber argues that French firms have little incentives to file for bankruptcy, due to the court administered process and the civil and criminal sanctions associated with bankruptcy.

[8] Since 2006, the sale as a going concern is viewed more than a liquidation procedure. However, in our views, sales protect more employment than pure liquidations, as a part of the employees is save through sales as a going concern.

efficiency? Question 2: *Does the bias in favour of continuation induce a financial cost for the creditors as a whole, so that financial efficiency is reduced?*

In this paper, we aim at giving some elements of answers to these two questions, exploring a unique sample of 1004 French bankruptcy files: 230 individual data par file were manually collected from the French Parisian courts for the years 1989-2005. Our aim is to provide a benchmark for discussions of the relative merits/drawbacks of such a strong pro-debtor model. Regarding question 1, we test whether the hierarchy of objectives set by the French bankruptcy code decisively influences the activities of the commercial courts, since liquidation, reorganization and sale as a going concern of bankrupt firms are wholly controlled by them. Regarding question 2, we test to which extent the work of commercial courts, i.e. the court administered rescue of failing companies, significantly affects the proceeds to be shared between all claimants in continuation cases? And what are the differences between the various legal outcomes of bankruptcy? We then focus on a set of rival buyout offers on sales as a going concern, and directly test the courts' trade-off between both kinds of efficiencies.

Our main findings can be summarized as follows. First, when analysing the courts' decision-making, it appears that French commercial courts do work to promote continuation, and thus actively improve social efficiency (compared to liquidation, continuation remains the best way to preserve employment, partially or not). Second, we find that courts operate under severe constraints (i.e. the initial characteristics of bankrupt firms), which are reduced by the development of prevention, since the legal reform of 1994. Third, contrary to expectation about such a debtor friendly system, we find this orientation of bankruptcy law does not imply a severe cost for the pool of creditors, especially in reorganization cases (however, this conclusion does not hold for sales as a going concern, since both liquidations and sales as a going concern generate similar levels of debt recovery). Fourth, we highlight the factors that influence global recovery rates: we find that, once continuation is likely to be decided, the court engages measures which finally increase the creditors' global recovery rate. Yet, this is not true anymore when liquidation appears to be unavoidable (here, the court cannot do anything on both financial and social sides). Fifth, focusing on sales as a going concern, we provide some empirical evidence that the protection of employment acts as a guide to discriminate between rival offers: for these specific outcomes, the court effectively trades off between social and financial efficiencies.

The paper is organised as follows. Section 1 summarizes the literature on empirical studies of bankruptcy legislation. Section 2 describes the dataset and discuss summary statistics. Section 3 provides models of determinants of the decisions of French commercial courts about the outcome of financial distress (reorganization, sale as a going concern or liquidation). Section 4 examines the consequences and costs of the French legislation, focusing first on the levels and the determinants of global recovery rates, and second, on the courts' choices between rival offers in cases of sale as a going concern. The last section presents our conclusions.

I. RELATED LITERATURE

Empirical studies dealing with bankruptcy practices in U.S. and Europe are currently booming, and the recent Doing Business reports[9] have led to many studies of the effects of national bankruptcy codes. These researches are of high interest because major developed countries tend to adjust their corporate reorganization procedure so as to make them quicker and more efficient at lower cost. Corporate reorganization may be solved either through formal bankruptcy (court solution), or through informal reorganization (private solution).

Regarding formal bankruptcy, the first topic addressed by the literature concerns the criteria taken into consideration by the courts. Empirical research tends to acknowledge the discrepancy between the written law and the procedures as they are enforced: for small firms under Chapter 11 procedure, Morrison (2007) demonstrates that U.S. commercial courts rarely allow failing firms to remain under their protection when their liquidation would be optimal[10]. Lambert-Mogiliansky, Sonin and Zhuravskaya (2006) prove, using a firm level database, that Russian commercial courts are largely dependent on regional governors and aim to keep some control over assets of financially distressed firms[11]. We also consider some new behavioural papers which focus on the perception bias of judges. Marinescu (2007) demonstrates that judges' decisions concerning unfair dismissals are influenced by the labour market conditions

[9] These reports, edited by the World Bank, involve empirical measures of bankruptcy law, securities law and law enforcement.
[10] Morrison (2007) also gives statistics on the duration and cost of the US legal reorganization process, which are useful for comparison with French bankruptcy process as the two samples are quite similar.
[11] For other reasons than political strategy, Dewaelheyns and Van Hulle (2006) measure the effect of 1997 Belgian bankruptcy code reform on bankruptcy rates.

(unemployment rate) and the macro economic context[12]. Rachlinski, Guthrie and Wistrich (2007) consider whether specialized bankruptcy judges make better decisions than judges who are generalists. In particular, they test the capacity of specialized judges to resist the influence of common heuristics when making their decisions. Their main result is that they too are vulnerable to outside pressures, like non specialized judges.

A second focus of the empirical literature on formal bankruptcy concerns the duration, cost and creditors' recovery rates involved in various legal ways to resolve financial distress. In this area, the most studied feature of bankruptcy law is the violation of the absolute priority rule (A.P.R.) in the U.S. reorganization process (Chapter 11). This deviation means that senior claims, such as secured creditors' ones, are not fully satisfied before junior creditors, especially equity holders, receive any payment. Recently, Weiss and Capkun (2007) suggested that the last changes in commercial courts' practice and the strengthening of secured creditor's rights in U.S. bankruptcy law may explain why violations of A.P.R. have decreased since research from the previous decade (Franks and Torous (1989), Eberhart, Moore and Roenfeldt (1990), Weiss (1990) and Betker (1995)). Weiss and Kapkun find also that bankruptcy costs increased in the period 1993-2004 because reorganization took longer (the length of the reorganization process in the U.S. is on average 465 days[13]). Another way to violate the A.P.R. described above is by debtor-in-possession financing which provides a super-priority status to post filing loans in order to encourage lenders to extend the further loans needed for continuation. Dahiya, John, Pury and Ramirez (2003) show that the over-investment problem (the expected effect of this post filing financing) is not severe in practice. Such loans also allow bankrupt firms to emerge more quickly and successfully from the reorganization process.

Regarding informal reorganization, Bebchuck (1988) shows that auctions are the best mechanism suited to determine and to apportion the value of a bankrupt firm's assets. Once the firm has filed for bankruptcy, an automatic stay on creditors' claims prevents them from dismantling assets before a sale may be undertaken. According to the highest bidder (which depends largely on the demand side conditions rather than the court's decision), the financially distressed firm is either

[12] Here, the bankruptcy rate (and also the unemployment rate) serves as a proxy to measure the economic conditions in which firms operate.

[13] We do not use their results on recovery rates for various stakeholders, because they test a sample of firms with assets in excess of US$100 millions to highlight deviations in favour of equity holders.

sold as a going concern, or is piecemeal liquidated allowing assets to move to their best use in the future. In Sweden, all bankrupt firms are turned over to a court-appointed official, who organizes an open cash-only auction to arbitrate between a continuation sale or a piecemeal liquidation. This situation has been studied by Thorburn (2000) and Strömberg (2000) in order to shed light on the merits of the auction relative to the classical reorganization process. Thorburn (2000) finds in practice that auctions are speedy (on average two months), have low direct bankruptcy costs, and exhibit similar levels of recovery rate to those reported by Franks and Torous (1994) for a sample of Chapter 11 cases[14]. On the other hand, Strömberg (2000) demonstrates that Swedish cash auctions, as compared to reorganizations, are immune to conflicts of interest between claimants, and that continuation, through a sale of assets to the incumbent manager, is a common way to resolve financial distress. However, such a pro-creditor bankruptcy system leads to inefficient liquidations[15].

In a cross country survey including U.K., Germany and France, Davydenko and Franks (2007) study the expected effects of national bankruptcy codes on the bank debt contracts which are initially renegotiated through private renegotiation. Using, as in our case[16], a sample of small and medium sized bankrupt firms, they find evidence that large differences in banks' legal rights across these countries correlate with significant differences in banking strategies and outcomes. In particular, French banks have a Coasian approach to their national pro-debtor bankruptcy code. They require more collateral than lenders in the UK or Germany. They rely also on special collateral forms which minimize the risk of dilution during the court-administered bankruptcy process. Finally, they find that bank recovery rates remain inferior in France due to the lack of creditor protection; France is ranked third in this sample. The strength of this approach is to include both bankruptcies and informal renegotiations. Yet the results obtained are restricted to bankers' claims only.

[14] Eckbo and Thorburn (2007) recently studied the issue of fire sale auctions and found that this phenomenon appears in piecemeal liquidation but not in sales as a going concern. They also study the variables which influence the bid price.

[15] In particular, these inefficient liquidations are frequently avoided through sale-backs (*i.e.* sales of assets to incumbent managers) when markets are illiquid. Market illiquidity implies that industry indebtedness is high and the firm has few non-specific assets.

[16] We prefer to focus on global recovery rates (including all stakeholders), in order to determine the *ex post* efficiency of the overall bankruptcy process.

This review of recent empirical studies shows that few previous studies have looked closely at the determinants of commercial court decisions between the competing outcomes of corporate financial distress. In this paper, we gather both pre-default variables (such as measures of financial distress, economic value of assets, or causes of default) and post-default variables (such as the measures engaged by the court). This helps in understanding the *ex-ante* and *ex-post* factors which impact on the outcome of bankruptcy procedures in a pro-debtor country such as France. In this paper, we study to what extent the law may, at the same time, promote continuation in order to preserve employment, and protect the interests of all other claimants. Our analysis should also be viewed as an evaluation of recovery rates for all classes of creditors, whereas previous studies dealt with fewer classes of creditors, sometimes with only secured banks. Finally, our large dataset drawn from the period 1989-2005 allows us to highlight the impact of the 1994 legal reform (which we interpret as the development of prevention among financially distressed firms) on the courts' decision making and on the global recoveries. Last, we explore, for the first time, how such a court administered process may discriminate between rival offers in the case of sales as a going concern.

II. DATA AND SUMMARY STATISTICS

A. Data source

The French bankruptcy code involves two complementary court administered procedures: continuation – either through a reorganization plan or sale as a going concern – and piecemeal liquidation: appendix 1 presents an overview of the two French legislations: i.e. the 25/01/1985 law, and the subsequent 10/06/1994 reform[17]. In all regressions and descriptive statistics, we split our bankruptcy cases in two sub-samples, running 1989-1994 (1985 legislation) and 1995-2005 (1994 legislation), to take into account the 1994 reform of bankruptcy law, and to evaluate the effect of this change. We expect that firms which filed for bankruptcy after the 1994 reform, are more likely to be worth saving, because commercial courts – especially in Paris – have increased prevention since 1994 (*via* an extension of the "*procedure d'alerte*" and the implementation of several prevention units: "*cellules de prevention-détection*").

[17] In January 2006, French bankruptcy law was changed to allow for easier bankruptcy filings. However, as the data are not available yet to cover this most recent reform, we focus on the period 1985-2005.

We assembled a unique database of 1004 French corporate bankruptcy filings over the period 1989-2005. This is divided into two sub sets, to take into account the 1994 bankruptcy law reform: 716 filings under the 1985 bankruptcy law (1989-1994), and 288 filings under the 1994 bankruptcy law (1995-2005). Specifically, we collected manually information from several documents (230 data per file): the bankruptcy declaration form, the Court's decision and motivations, the list of claims, and the financial-economic administrator's report on the bankrupt firm[18]. The data were entered on a specific template whose general form is described in appendix 2. We looked only at Parisian courts because of ease of collection availability, quality of data, and especially the greater capacity of these Courts to develop prevention through out-of-court settlements: since the 1994 bankruptcy law reform, the Parisian courts set up prevention units ("*cellules de prevention-détection*") which aim to audit the firm's managers when the court receives clear signals of economic / financial difficulties. To evaluate this selection bias, we verified that the characteristics of our sample do not differ significantly from national figures, in several ways (see appendix 2, table A1). First, the percentages of various outcomes of bankruptcies do not differ from the national averages (liquidations are more than 90% on average[19]). Second, the sectors in which bankruptcy firms perform and the bankruptcy rates in our sample are also quite similar to the national figures. The sole difference is relative to the legal form: Paris shows slightly higher frequencies of limited responsibility firms.

The first step in constructing the database was to exclude agricultural and financial firms which depend on a specific bankruptcy code, and to keep only closed bankruptcy affairs (only closed procedures allow us to compute final creditors' recovery rates). This reduced the sample to 858 bankrupt firms (596 before 1994, 262 after 1994). We chose also to increase the proportion of continuations (i.e. reorganizations and sales) up to 40% of all procedures, in order to obtain a more balanced database compared to the national statistics, which exhibit a deep imbalance between continuations and liquidations[20].

[18] The French original of these documents reads: "*déclaration de cessation des paiements, extrait Kbis, jugement d'ouverture de la procédure de redressement judiciaire, extraits des jugements modificatifs et jugement définitif sur le sort de l'entreprise, bilan économique et social (rédigé par l'administrateur judiciaire), requêtes auprès du juge commissaire ainsi que les réponses de celui-ci (ordonnances), états des créances, rapports L13*".

[19] Other European countries show similar imbalance between continuations and liquidations.

[20] When computing total statistics, we weighted the figures relative to each outcome in order to have a level of 90% of liquidations and 10% for continuations.

Among continuations, we used the SIRENE database of INSEE (the French National Institute of Statistics) to identify firms whose reorganization failed and consequently ended up in liquidation; our recovery rates take into account the probability of success of reorganization plans[21]. Since these plans last for several years (7 years on average), we used the risk-free interest rate of the Treasury to discount the recovery amounts at the time of the court's decision. Finally, in France, some peculiar claims can be repaid out of the collective procedure; this is restricted to the providers of goods / merchandises, provided their contractual relations with the firm refer explicitly to such protection[22].

For each bankruptcy filing, we gathered data about the firm's economic and financial difficulties, the causes of default (51 codes; see appendix 2), the measures taken by the Courts (33 codes; see appendix 2), the outcome of the financial distress (we distinguish between reorganization, sale as a going concern, immediate liquidation, and liquidation after an observation period), the characteristics of the buyout proposals (sales), and the amounts recovered for each class of claimants according to the legal priority rule of claimants: employee's '*superprivilège*', new money, secured creditors (State and social claims, collaterals), and unsecured creditors (for details, see appendix 3, tables A2 and A3).

B. Summary statistics, terminology and sample structure

The sample firms cover a large cross section of sectors (from 12% to 23% in the commercial sector, 23% to 34% in industry, and 44% to 55% for services[23]); most of the firms have limited liability. To estimate the shortage of liquid assets and to compare the market value of assets and the face value of due claims, we used two complementary variables: (1) the variable "*assets minus claims*" measures the market estimated value of total liquid assets minus the total verified due claims; (2) the variable "*coverage rate*" is the ratio of the market value of all assets – estimated at the date of triggering – to the total of all due verified claims. The length of the procedure gives the number of months between the triggering of the bankruptcy procedure and

[21] For sale as a going concern, we did not investigate whether those firms went bankrupt again later. In such cases, all debts come due when the bankrupt firm is sold.
[22] These peculiar privileges are [1] "*droit de revendication*" and [2] "*droit de rétention*".
[23] These figures are for the period 1985-1994. The percentages over the period 1994-2005 are 18.7% for the commercial sector, 27.1% for industry and 54.2% for services.

the Court's final decision[24]. Finally, since we did not collect any direct information on the level of bankruptcy costs, we estimated them from the legal remunerations of bankruptcy practitioners, defined by the French regulation n°85-1390 (Law 12/27/1985) which explicitly relates these remunerations to the size of the firm and the outcome of the bankruptcy process[25]. In Table 1, the legal outcomes (reorganizations, sales, liquidations) are compared to better identify bankrupt firms in each outcome.

TABLE 1

SUMMARY STATISTICS AND SAMPLE STRUCTURE

Averages and averages of ratios	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	ANOVA test: Fisher stat.	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	ANOVA test: Fisher stat.
	Sample: Bankruptcy Law 01/25/1985: 596 observations					Sample: Bankruptcy Law 06/10/1994: 262 observations				
Nb. of observations (sample by issues)	102	88	320	86	-	88	74	80	20	-
- Limited responsibility	91,9%	86,0%	88,2%	86,3%	-	87,5%	86,8%	96,3%	92,0%	-
- Other legal forms	8,1%	14,0%	11,8%	13,7%	-	12,5%	13,3%	3,7%	8,0%	-
- Commerce	22,6%	13,0%	23,6%	22,1%	-	21,6%	21,7%	20,7%	12,0%	-
- Industry	25,8%	34,0%	32,7%	30,5%	-	25,0%	22,9%	24,4%	32,0%	-
- Services	51,6%	53,0%	43,7%	47,4%	-	53,4%	55,4%	54,9%	56,0%	-
Nb. of employees	31,7	11.6 (2)	3.5 (28)	12.3 (6)	17.36***	37,2	11,0	7,4	30,0	4.83***
Turnover (K€)	5174 (5)	1477 (6)	512 (62)	1870 (16)	13.17***	3694 (6)	1219 (8)	519 (33)	1063 (9)	5.90***
Assets minus claims (economic values, in K€)	-3259 (63)	-975 (65)	-295 (101)	-2666 (38)	4.20***	-2022 (11)	-566 (5)	-354 (11)	-2564 (7)	4.31***
Coverage rate	36,1%	70,3%	16,3%	24,4%	45.69***	50,1%	55,1%	37,3%	46,2%	4.30***
Lenght of the procedure (months)	6,9	13.9 (1)	0.1 (25)	6.5 (4)	100.98***	8.7 (2)	15,5	0.0 (24)	9,6	64.54***
Direct bankruptcy costs / recovered amounts	3.4% (44)	19.1% (48)	2.8% (64)	3.6% (20)	5.97***	10,0%	14,3%	14,0%	9,8%	1,21

*Variables whose Fisher's stat. is significant at the 1%, 5%, and 10% levels are indicated by ***,**, and * respectively.*
Figures in parenthesis are the number of missing values.

Upon comparing the samples from before and after the 1994 reform, we observe a slight increase in the length of procedures and bankruptcy costs, when commercial courts increased prevention during the same period. This also reflects a recent rise of the firms' size (measured by the number of employees). In addition, reorganizations take much time and generate higher bankruptcy costs. In contrast, firms which are immediately liquidated present the lowest values for turnovers and coverage rates. The best performing bankrupt firms, according to their coverage rates, carry on through reorganizations, whereas sale as a going concern concentrates on the largest firms (measured by turnover and number of employees), probably due to their reputation. Finally,

[24] We do not take into account the period, after the Court's decision, during which assets are liquidated (which may take several months).

[25] We used the ratio (direct bankruptcy cost / recovered amounts), where recovered amounts are based on the liquidation proceeds, the sale price or the schedule of repayments in reorganization cases.

Table 1 suggests that decision making in commercial court is strongly influenced by the firms' initial characteristics (see Fisher statistics for ANOVA tests). During the second period there is a significant reduction in the gap between the coverage rates for each outcome of the bankruptcy process. We interpret this change as a consequence of the increase in prevention by commercial courts; after 1994, the importance of financial distress is more uniform between firms when entering the procedure.

III. DO THE COURTS PROMOTE SOCIAL EFFICIENCY IN PREPARING CONTINUATION?

Our main hypothesis is that French commercial courts are biased in favour of those outcomes which better maintain activity, in order to preserve employment[26]: we study how this objective is reflected in the probability of reorganization or the probability of sale as a going concern, compared to the firm's liquidation. Initially, we determine: [1] which variables drive the bankruptcy courts' decisions about the three issues of default: reorganization, sale as a going concern, and liquidation; and [2] the constraints under which commercial courts operate when they determine the legal outcome of bankruptcy. More specifically, we measure to what extent the way the courts manage bankruptcy significantly increases the probability of continuation. We estimate a multinomial LOGIT regression on two samples of firms which went bankrupt either under legislation 01/25/1985 (557 companies) or legislation 06/10/1994 (267 companies). The dependent variable is the probability that a firm, following the court's decision, falls into a reorganization procedure, is sold as a going concern, or is liquidated.

To model the court's decision under constraint[28], we use a first set of *ex-ante* explanatory variables, in the sense they describe the firm's initial situation, and thus constrain the court's choice between continuation and liquidation. This set covers:

[1] the financial situation of the firm when it enters bankruptcy: the coverage rate (defined as the market value[29] of assets relative to the debts), the amount[30] of claims and the debt

[26] Recall that the first article of French bankruptcy law since 1985 prioritises the safeguarding the business, then maintaining the firm's activity and employment, and finally the discharging of liabilities.
[27] Recall that the first article of French bankruptcy law since 1985 prioritises the safeguarding the business, then maintaining the firm's activity and employment, and finally the discharging of liabilities.
[28] For instance, the probability of sale as a going concern depends strongly on both a demand side constraint (the existence of a potential buyer for the firm's assets) and an offer side constraint (the present value of its assets).

structure (the absolute priority rule distinguishes between claims with super-priority status (recent unpaid wages, less than two months), claims with a general privilege status (employees, tax authorities and bankruptcy costs), claims with a special privilege status (secured claims with collateral), and junior claims);

[2] the cause(s) of default (see the 51 codes of default given in appendix 2);

[3] the firm's size: i.e. the number of employees (log), which is a key factor likely to affect the courts' willingness to preserve employment[31]);

[4] the sector, the legal form, and the firm's age.

We consider also a set of *ex-post* variables, which describe the court's management during the procedure. These variables cover the various measures the courts may undertake or allow (appendix 2 provides the list of the 33 codes we use regarding these measures). This set of measures is a useful proxy of the court's efforts to prepare and promote continuation. Among them, we distinguish between "connected measures" and those which are not[32]. Measures are said to be "connected" when they are of same nature as the cause of default (for instance, the legal administrator may have engaged measures related to *outlets*, while the original cause of default was, partially or not, due to a fall of *outlets*). This distinction between connected and unconnected measures helps in understanding to what extent the court's management is complementary (or not) to the origin of default. Last, we recognize a third kind of measure, named "legal measures". These are specific to the French bankruptcy code and are related to the ability of courts to enforce the maintenance of some contracts (electricity, furniture…).

Table 2 presents the results of the model using multivariate LOGIT regression analysis. We report the coefficients for reorganization and sale as a going concern, relative to liquidation. As explained below, our hypothesis of the influence of the 1st article of French law on court decisions is supported by the data. As predicted, by controlling for firm-level characteristics, commercial courts work to promote continuation in order to maintain employment. The number of both connected and unconnected measures – which reflect the restructuring efforts of

[29] This value is computed and verified during the procedure by the representative of creditors.
[30] It is more likely that courts take into account the levels of the different claims rather than their relative structure.
[31] Employees are both an *ex ante* constraint and a variable that may affect the courts' *ex post* decision.
[32] By analyzing the number of connected and of unconnected measures (whatever their type), we reduce the risk of colinearity between the causes of default and the measures engaged.

commercial courts to promote continuation – have a large, positive and statistically significant effect on the probability of continuation, over the probability of liquidation[33]. Referring to the first question we address in the paper, we find that the French courts effectively play a central role in facilitating reorganization plans and sales as a going concern, hence increasing social efficiency through a higher probability of continuation.

TABLE 2

ESTIMATES OF OUTCOMES OF BANKRUPTCY PROCESS

Variables:	**Legislation 25/01/1985 (557 companies)**				**Legislation 10/06/1994 (267 companies)**			
	Output = sale as a going concern (ref. liquidation)		**Output = firm's reorganization (réf. liquidation)**		**Output = sale as a going concern (ref. liquidation)**		**Output = firm's reorganization (réf. liquidation)**	
	Estimation	Prob. > χ^2	Estimation	Prob. > χ^2	Estimation	Prob. > χ^2	Estimation	Prob. > χ^2
Constant	-7.3682***	<.0001	-9.2272***	<.0001	-3.8693***	<.0001	-2.965***	0.0027
Nb. cause(s) of defaut: outlets	-0.4589**	0.0401	-0.5513*	0.0765	0.0560	0.8648	-0.256	0.4666
Nb. cause(s) of defaut: strategy	-0.5952	0.1794	-0.4282	0.4983	0.1708	0.7522	0.2469	0.6623
Nb. cause(s) of defaut: production	0.0963	0.7304	0.8530**	0.0145	-0.0831	0.8194	-0.1341	0.7098
Nb. cause(s) of defaut: finance	0.2266	0.3046	-0.3347	0.3252	0.1875	0.6318	-0.0247	0.9537
Nb. cause(s) of defaut: management	0.1129	0.6475	0.3804	0.2253	0.4459	0.3548	-0.0595	0.9158
Nb. cause(s) of defaut: accident	-0.2697	0.3879	-0.0890	0.8372	0.5174	0.2222	0.7576*	0.0766
Nb. cause(s) defaut: external environment	-0.4422	0.1309	-0.3721	0.3589	0.2533	0.5279	0.8111**	0.0473
Nb. of connected measure(s)	0.5069**	0.0261	0.9878***	0.0005	0.1334	0.7385	0.8145**	0.0331
Nb. of unconnected measure(s)	0.9231***	0.0002	1.7598***	<.0001	1.0005**	0.0158	1.4746***	0.0004
Nb. of legal measure(s) (enforcements…)	0.8623	0.332	0.0978	0.9235	-1.8322	0.1718	-2.4100*	0.0736
Suspect period declared (cf. suspection of tricks)	-0.9121***	0.0002	-0.5624*	0.0625	0.0822	0.7421	-0.0327	0.9042
Coverage rate (economic value of assets / debts)	2.2373***	<.0001	6.1739***	<.0001	-0.0180	0.9775	0.8335	0.1949
Legal form: limited responsibility	-0.4291	0.1279	-0.4819	0.1525	-0.7823**	0.0319	-0.1029	0.7898
Sector: commercial business (ref. industry)	-0.1292	0.6242	-1.2518***	0.0017	-0.1905	0.5806	-0.3549	0.3203
Sector: services (ref. industry)	0.2981	0.1671	0.6213**	0.0491	0.3401	0.2329	0.1941	0.507
Ln(firm's age)	0.8789***	<.0001	1.2828***	<.0001	0.4936**	0.0248	0.2097	0.3626
Ln(employees)	0.5800***	0.0011	-0.1457	0.5719	0.9287***	0.0019	0.1035	0.7416
Ln(debts: "superprivilège") (=recent unpaid wages)	-0.0402	0.6841	0.0804	0.6106	-0.7465***	<.0001	-0.8737***	<.0001
Ln(debts: secured claims: collaterals)	0.1486*	0.0961	-0.1868	0.1097	0.0830	0.3851	0.1095	0.283
Ln(debts: secured claims: State & employees)	0.2751***	0.0002	0.1648	0.1095	0.1045	0.5716	0.2931	0.1135
Ln(debts: unsecured claims)	0.2549**	0.0152	0.2787**	0.0459	0.4383***	0.0009	0.2868**	0.0346
Multinonial independant LOGIT regression	**Test**	**Khi 2**	**Pr > Khi 2**		**Test**	**Khi 2**	**Pr > Khi 2**	
	Likelihood Ratio	542.82	<.0001		Likelihood Ratio	182.53	<.0001	
	Score	462.95	<.0001		Score	150.87	<.0001	
	Wald	187.29	<.0001		Wald	101.62	<.0001	

NOTE. – This table sets out the results of LOGIT regression of the determinants of the type of continuation (either reorganization or sale as a going concern) upon the eventual decision to liquidate the firm piecemeal. We distinguish financially distressed firms which filed for bankruptcy before and since 1994. In both samples, the dependent variables are the probabilities of sale and of reorganization relative to the probability of liquidation. Coefficients significant at the 1%, 5%, and 10% levels are indicated by ***,**, and *, respectively.

[33] The causes of financial distress (and the sector in which the firm performs) help little in explaining the court's decision. This reflects the low difference between bankrupt firms apart from their level of debt outstanding and their coverage rate.

Economic and financial *ex ante* constraints also play a crucial role in the court's decision making during the bankruptcy process. In other words, even if the efforts of commercial courts in favour of continuation have an effect on the outcome of bankruptcy, other factors pre-determine the outcome. First, the probability of sale as a going concern strongly depends on the buyout offers: these are strongly linked to the size of the firm (proxied here by the number of employees). Second, the probability of continuation (either through reorganization or sale), mainly depends on the firm's initial characteristics: i.e. the economic value of its assets relative to its debts (see coverage rate), its age, or its capacity to pay wages (see level of claims with a super-priority status).

Bankruptcy law may also have an effect on these constraints through efforts toward prevention. Indeed, the accrued prevention since 1994 has involved two major changes. First, the probability of continuation (especially for reorganization plans) is less negatively affected by internal factors (outlets, production) and more by external factors (accident, external environment): this reflects that default is less due to faulty management now prevention is reinforced. Second, after 1994, the coverage rate does not impact on the probability of continuation (it was significantly negative before 1994): thanks to prevention, the initial financial situation of the firm does not pre-determine the final outcome anymore. These findings show that earlier resolution of financial distresses, due to the efforts in prevention, has significantly strengthened the value of bankrupt firms. In other terms, the probability of continuation is not only affected by the way the courts manage bankruptcy, but also by the prevention policy, which rules before any default.

To summarize, we find strong indications that French commercial courts actively seek to promote continuation during the bankruptcy process. Yet, this action is subject to severe external constraints, which the development of prevention, initiated by the legal reform of 1994, has successfully reduced.

IV. THE FINANCIAL COST OF SOCIAL EFFICIENCY: EVIDENCE FROM GLOBAL RECOVERY RATES

The relation between the various options in French bankruptcy procedures and the global recovery rate is of interest, because it links the work of commercial courts constrained by the 1st article of the French law (promoting the protection of employment), with the potential cost (the "price") of this policy through the global recovery rate[34]. This variable serves as a proxy to evaluate *ex post* financial efficiency of the bankruptcy process: if the global recovery rate is sufficiently high when firms continue to operate through reorganization or sale as a going concern (relative to liquidation), it appears that commercial courts do not commit too many type 1 errors[35]. In contrast, the common view is that debtor friendly systems fail to eliminate bankrupt firms which are economically inefficient.

To consider the "price" of social efficiency, we propose three complementary approaches. In section A, we firstly compute ANOVA tests on the averages of recovery rates for each possible course (immediate liquidation, liquidation after an observation period, reorganization, and sales as a going concern) in order to: [1] compare the different average recovery rates for each course; and [2] test whether these averages differ significantly between the courses of action. If the global recovery rates are significantly lower (resp. higher) for continuations than for liquidations, we can infer that the protection of social efficiency – through a preference for continuations – has a cost (resp. gain) in terms of *ex post* financial efficiency. Yet, as the ANOVA approach does not consider control variables, we extend our analysis using two complementary models. In section B, for each outcome (either continuation or liquidation[36]), we use a double censored LOGIT model to regress the global recovery rate (defined on the [0,1] interval) on a set of variables representing (1) the way default has been managed (before and after bankruptcy), (2) the firm's characteristics, and (3) the importance of financial distress. In section C, we directly focus on the "dilemma" (social *vs.* financial) using rival buyout proposals on sales as a going concern. As each proposal is assessed by a legal administrator before the court selects an offer, we are able to detect which characteristics the judges prioritise.

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[34] We consider that bankruptcy courts maximise the joint welfare of various stakeholders.

[35] Type 1 errors occur when economically inefficient failing firms are mistakenly categorized as efficient and are allowed to reorganize.

[36] Here, we mix sales and reorganizations among continuations. Unlike in section III, our purpose is not to explain the trade-off between all possible issues, but to explain the recovery rates associated with the two major distinct outcomes of any bankruptcy procedure, continuation or liquidation.

A. The differences between average global recovery rates

Table 4 shows the structure of claims and the recovery rates for each class of creditors. It appears a higher level of unsecured liabilities is related with a smaller global recovery rate. This seems natural, because junior claimants have lower recovery rates than other stakeholders due to their ranking under the French absolute priority rule. New money (i.e. claims arising after the bankruptcy triggering) also plays a specific role: new creditors recover as much as (or more than) the average. This fact has led to severe criticism of the French law: in particular, bankers saw this highest priority of new money over anterior secured creditors as a threat to collateralisation. This is why the legislator modified the law in 1994, giving higher priority to long-term secured claims over new money (in cases of liquidation). In our opinion, this debate is of minor importance, because we find that new money is marginal when reported on the total of claims (from 0% up to 5.6%); in fact, most post default payments are paid in cash.

TABLE 4 – DESCRIPTIVE STATISTICS OF CLAIMANTS' RECOVERY RATES

Claims (structure)	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	ANOVA test: Fisher stat.	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	ANOVA test: Fisher stat.
	Sample: Bankruptcy Law 01/25/1985					Sample: Bankruptcy Law 06/10/1994				
Employ's "superprivilège"	2,4%	4,3%	3,1%	1,7%	1,62	4,1%	3,9%	15,8%	15,3%	27.57***
New money	0,0%	5,6%	0,0%	0,0%	22.10***	4,2%	0,4%	0,0%	3,2%	13.71***
State & employees	15,4%	19,7%	10,1%	9,3%	4.70***	29,6%	32,2%	42,0%	44,3%	4.84***
Collaterals	29,6%	19,3%	37,9%	35,3%	9.60***	12,3%	19,6%	8,0%	6,4%	4.05***
Unsecured	52,6%	51,1%	48,8%	53,6%	0,87	50,4%	44,0%	34,2%	30,9%	6.31***

*Variables whose Fisher's stat. is significant at the 1%, 5%, and 10% levels are indicated by ***,**, and * respectively.*

Recovery rates (average of ratios)	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	Total (weighted)	ANOVA test: Fisher stat.	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	Total (weighted)	ANOVA test: Fisher stat.
	Sample: Bankruptcy Law 01/25/1985: 596 observations						Sample: Bankruptcy Law 06/10/1994: 262 observations					
Employ.'s "superprivilège"	88,2%	89,8%	57,8%	80,4%	*60,2%*	3.92**	84,5%	91,3%	75,0%	74,2%	*75,4%*	3.44**
New money	n.s.	73,2%	n.s.	n.s.	*n.s.*	-	60,7%	n.s.	n.s.	25,0%	*n.s.*	-
Secured (all)	44,2%	64,6%	19,2%	27,1%	*20,1%*	12.90***	31,0%	73,4%	19,5%	28,8%	*21,6%*	18.31***
- State & employees	41,8%	63,0%	23,0%	25,4%	*24,1%*	13.01***	30,7%	73,7%	15,3%	28,2%	*17,8%*	22.19***
- Collaterals	42,5%	63,9%	17,7%	29,3%	*18,8%*	11.13***	35,0%	72,0%	36,0%	50,0%	*38,0%*	13.64***
Unsecured	10,5%	64,5%	5,1%	6,8%	*5,7%*	43.66***	6,2%	72,1%	2,5%	6,2%	*4,9%*	286.12***
Total	*24,0%*	*65,7%*	*12,1%*	*16,2%*	**12,9%**	16.67***	*23,9%*	*73,8%*	*23,5%*	*26,0%*	**24,9%**	65.91***

*Variables whose Fisher's stat. is significant at the 1%, 5%, and 10% levels are indicated by ***,**, and * respectively.*

n.s. = non significant figures (no enough observations: less than 1% of the total of claims - sample size).

NOTE. – The upper table gives the structure of various claims. Creditors are ordered according to their level of priority: (1) claims with a super priority status, (2) post filing priority claims, (3) claims with a privilege status, (4) secured claims, (5) junior claims. The lower table provides the recovery rates of different classes of creditor for the four possibilities: sale, reorganization, liquidation (immediate or after a period of observation). Recovery rates are given as a percentage of the claims. In both tables, ANOVA tests are shown: averages differing significantly from one possibility to another at the 1%, 5%, and 10% levels (Fisher statistic) are denoted ***,**, and *, respectively.

The crucial question is whether the maintenance of social efficiency involves a loss of financial efficiency. This is likely to happen if recovery rates are significantly lower for continuations than for liquidations. The differences observed between global recovery rates in reorganization and liquidation cases (between 66% and 74% for continuations, and between 12% and 26% for liquidations[37]) now indicate that bankruptcy courts accurately classify firms as economically efficient *versus* inefficient when they approve continuation through reorganization. At this level, we do not find empirical evidence of a trade-off between social efficiency and financial efficiency; in fact the best way to continue the firm's operations (i.e. reorganization) exhibits also the largest average recovery rate. In contrast, the difference in recovery rates in reorganization *versus* sale as a going concern is sufficiently large (nearly 50 points) to conclude that continuation through sales achieves a lower level of *ex post* financial efficiency, but not worse than for liquidations.

These primary results must be completed by a deeper analysis controlling for additional explanatory variables (section B) and focusing more directly on the trade-off between the social and financial consequences of the courts' decision (section C).

B. The determinants of financial efficiency per bankruptcy outcome

Table 5 sets out the results of double censored LOGIT regression of the post default global recovery rate (privileged, secured, and junior) for liquidations (immediate or not) and for continuations (sales and reorganization plans). A LOGIT model is appropriate, since the estimated recovery rate is between zero and one: appendix 4 gives the density functions of the recovery rates for liquidation and continuation for both samples. By construction, the LOGIT approach is subject to heteroscedasticity, since the variance of errors depends on the explanatory variables; thus, the hypothesis of multiplicative heteroscedasticity[38] was tested on every model, and was accepted (at the 1% level) in almost all cases (excepted for the model on continuations

[37] The figures for the later period take higher values than in the first period. Indeed, due to the development of prevention procedures to force financially distressed firms to file earlier for bankruptcy or to promote out-of-court negotiation (such as "*règlement amiable*"), recovery rates in reorganization and liquidation are much higher. For sales as a going concern, however, we find the opposite effect.

[38] For the heteroscedastic model, the test is of the form $\sigma_i^2 = \sigma_\varepsilon^2 \, exp(z_i \cdot \gamma)$, where σ_i^2 is the variance of the error for observation (i); σ_ε^2 is a constant parameter (i.e. the variance of the error if the model was homoscedastic); z_i is a subset of the explanatory variables (x_i); γ are the parameters influencing the variance of errors, through their effect on the z_i variables.

under the 1994 legislation). We include only the "coverage rate" (i.e. the economic value of assets relative to debts) as a source of heteroscedasticity; indeed, this rate is expected to increase with the number of censored observations. Consequently, to model heteroscedasticity, we restrain the analysis to the subset of variables that may lead the recovery rate to its extreme values (i.e. 0 or 1). This is the case of the coverage rate, whose level is the starting point of all future recoveries (i.e. a low/high coverage rate is likely to bring about a null/100% global recovery rate). The density functions of residuals for the four regressions are given in appendix 5.

TABLE 5

ESTIMATES OF GLOBAL RECOVERY RATES

Variables:	**Endogeneous variable: Total recovery rate**							
	Legislation 25/01/1985 (545 observations)				**Legislation 10/06/1994 (251 observations)**			
	Liquidations (358 obs.)		**Sales & Reorganizations (187 obs.)**		**Liquidations (94 obs.)**		**Sales & Reorganizations (157 obs.)**	
	Estimation	Prob. > |t|	Estimation	Prob. > |t|	Estimation	Prob. > |t|	Estimation	Prob. > |t|
Constant	0.0398	0.4287	0.4506**	0.0101	-0.2187	0.2037	0.6406**	0.0159
Nb. cause(s) of defaut: outlets	0.0025	0.7907	-0.0499**	0.0466	-0.0159	0.6048	-0.0382	0.4951
Nb. cause(s) of defaut: strategy	-0.0308	0.1186	-0.0854*	0.0903	-0.0078	0.8759	-0.0240	0.7596
Nb. cause(s) of defaut: production	-0.0001	0.9931	-0.0436	0.1365	-0.0725**	0.0192	-0.0941	0.1261
Nb. cause(s) of defaut: finance	-0.0163	0.1345	-0.0604**	0.0241	-0.0236	0.5182	0.0420	0.5152
Nb. cause(s) of defaut: management	-0.0301**	0.0114	-0.0454*	0.0687	0.1733***	0.0024	-0.0364	0.6072
Nb. cause(s) of defaut: accident	0.0065	0.6215	0.0336	0.3896	0.0340	0.4497	0.1248**	0.0208
Nb. cause(s) defaut: external environment	-0.0081	0.5243	0.0303	0.3029	0.0337	0.3717	-0.0091	0.8763
Nb. of connected measure(s)	-0.0132	0.5179	0.0439***	0.0099	0.0372	0.5539	0.1438***	0.0023
Nb. of unconnected measure(s)	0.0042	0.8334	0.0148	0.4202	-0.0449	0.3341	0.0281	0.4811
Nb. of legal measure(s) (enforcements…)	0.0212	0.8195	-0.0392	0.5475	-0.2153	0.4883	0.2377	0.2561
Suspect period declared (cf. suspection of tricks)	-0.0551***	0.0005	0.0165	0.7531	0.0631	0.1847	-0.0269	0.7323
Legal form: limited responsibility	0.0310	0.1746	-0.1263*	0.0531	0.2026**	0.0326	0.0196	0.8536
Sector: commercial business (ref. industry)	-0.0130	0.5119	0.0967*	0.0787	-0.0290	0.6274	0.0089	0.9207
Sector: services (ref. industry)	0.0000	0.9987	0.0094	0.8385	-0.0687	0.1496	0.0194	0.8211
Ln(firm's age)	0.0093	0.3770	-0.0293	0.2658	0.0324*	0.0936	0.0371	0.2751
Ln(employees)	0.0146**	0.0311	-0.0286	0.1242	0.0021	0.9241	-0.1066***	<.0001
Unsecured claims / Total claims	-0.0009	0.9715	-0.1118	0.1159	-0.0605	0.4366	-0.2572**	0.0364
Current assets (excluding cash) / Total assets	-0.0139	0.4705	-0.1151*	0.0583	-0.0142	0.7822	-0.1093	0.3026
Coverage rate (economic value of assets / debts)	0.7752***	<.0001	0.6254***	<.0001	0.3588***	<.0001	0.2007**	0.0299
Variance of errors (sigma)	0.0736***	<.0001	0.1222***	<.0001	0.0914***	<.0001	0.3540***	<.0001
Multiplicative heteroscedasticity: coverage rate	4.0380***	<.0001	2.1435***	<.0001	2.4077***	<.0001	-	-
Double censored TOBIT regression (with heteroscedasticity, except for year 1994: sales & reorganizations)	**Log likelihood:** 88.13 **Heterosced. test:** 153.53 **Inferior bound:** 0 **Superior bound:** 1 **Inf. bd. (nb. obs):** 81 **Sup. bd. (nb.obs):** 8		**Log likelihood:** -34.43 **Heterosced. test:** 13.94 **Inferior bound:** 0 **Superior bound:** 1 **Inf. bd. (nb. obs):** 13 **Sup. bd. (nb.obs):** 12		**Log likelihood:** 27.50 **Heterosced. test:** 11.34 **Inferior bound:** 0 **Superior bound:** 1 **Inf. bd. (nb. obs):** 0 **Sup. bd. (nb.obs):** 2		**Log likelihood:** -75.38 **Heterosced. test:** 0.08 **Inferior bound:** 0 **Superior bound:** 1 **Inf. bd. (nb. obs):** 7 **Sup. bd. (nb.obs):** 16	

NOTE. – Table 5 sets out the results of a double censored LOGIT regression of the global recovery rate, either for liquidation or continuation (reorganization and sale as going concern). The endogenous variable takes a value between zero and one (see appendix 4). We use similar explanatory variables to the first regression analysis. We add a measure of the percentage of junior claims relative to the sum of all claims (*Unsecured claims/Total claims*). The variance of the errors is an output of the LOGIT approach (linked to the expression of conditional moments). Table 5 provides also the results of the tests for heteroscedasticity: in one case only, when homoscedasticity was accepted. Coefficients significant at the 1%, 5%, and 10% levels are respectively indicated by ***, **, and *.

The firm specific explanatory variables remain nearly the same as for the first regression analysis: these are (1) the origin of bankruptcy (cause(s) of default) and the way it was managed (measures engaged by the courts), (2) the firm's characteristics (age, size, sector), and (3) the importance of financial distress (coverage rate and debt structure). We analyse their effect on the global recovery rate for each outcome: first continuation, then liquidation.

Continuation (through sales or reorganization plans) is the prioritised outcome from the French code perspective, because it is considered the best way to ensure social efficiency. Thus, the question is: once social efficiency is likely to arise through continuation, to what extent can the courts increase *ex-post* financial efficiency? Analysis of some explanatory variables helps to answer this question. For continuations taking place under the 1985 legislation, several causes (outlets, strategy, finance, and management) negatively affect the global recovery rate, which is no longer true for continuations under the 1994 legislation (only accidents significantly increase the amounts recovered). The interpretation is straightforward and is directly linked to the development of prevention after 1994: before this date, the courts were facing many delayed defaults, so that *ex-post* efficiency (proxied by the global recovery rate) was mostly pre-determined by *ex-ante* factors, prior to any legal post-intervention. The increasing role of prevention after 1994 has changed matters, so that – on average – *ex-post* efficiency is no longer affected by external *ex-ante* factors[39]. In section III, the measures engaged under the courts' supervision were positively correlated with the issue of continuations; this suggested that French courts actively prepare continuations over liquidations, and by doing this promote social efficiency. Additionally here, within continuations, some measures (the "connected" ones) are undertaken by the courts, so that the global recovery rate is also increased. This result is of prime importance, because it does not exactly confirm a pure trade-off between social and financial efficiencies, but rather a hierarchy of objectives: once some measures have made continuation a promising issue, the court allows or facilitates measures that raise the creditors' recovered amounts. Yet this does not mean there is no trade-off: indeed, focusing on the effect of the number of employees on the recovery rate (which is significant and negative after the 1994 reform), the continuation seems to be less financially efficient when it applies to firms with

[39] Since the triggering of bankruptcy takes place sooner when the origin of default is accidental, it is not surprising that accidents only positively affect recovery rates after 1994 (see Table 4).

higher employment stakes[40]. To sum-up: for continuations, the trade-off between social and financial efficiency is partially confirmed, when looking at big firms; but this does not mean that courts are unable to increase *ex-post* financial every time they can. On the contrary, the observation period also provides the opportunity to undertake measures aimed at increasing the global recovery rate.

Liquidations should be the default output of the bankruptcy when social efficiency cannot be reached by other means (cf. 1st article of the French law). So the question is: once liquidation appears to be unavoidable, can the courts promote at least financial efficiency? The answer depends on the context, as shown in the comparison between 1985 liquidations and post-1994 liquidations. Because of the lack of prevention, under the 1985 law, the bulk of liquidations dealt with firms having nearly zero assets, so that liquidation is more a statement than a choice. We consider also that courts can declare a "suspect period" in order to recover some previously sold assets or cancel doubtful contracts, if any. But this strategy does not achieve to increase the proceeds to share between claimants; on the contrary, the dummy variable "suspect period" has a significant negative impact on the global recovery rate. From the same perspective, the number of employees has a positive effect on the global recovery rate for the 1985-law sample; this reflects the case of firms with numerous employees *and* significant levels of assets, leading to higher recovery rates. To summarize: for liquidations, whatever the period (post or prior 1994), commercial courts have no significant way to improve financial efficiency, and the firm's situation at the moment of bankruptcy filing settles the outcome. Further, under the 1985 law, the suspect period has a significant and negative impact on global recovery rates. Since the 1994 reform, the variables increasing the global recovery rate under liquidation are also out of the court's area of action; these variables are the causes of default (production and management difficulties), the legal form (limited liability), and the age of the firm.

Overall, there does not appear to be a significant area for the courts to improve financial efficiency during the bankruptcy process except for continuations, where some "connected measures" (as defined above) significantly improve the global recovery rate.

[40] This takes place mainly through sales, which are the privileged mode of continuation for big firms.

C. The choice between rival sales as a going concern: is there a dilemma?

Until now, we did not *directly* test for a dilemma between social and financial efficiencies. To do so, we need a set of several rival outcomes upon which the court makes a decision, depending on the relative characteristics of each possible outcome. Again, we use our database to perform the test, as it contains a unique source of data on the rival buyout proposals in case of sale as a going concern. The content of these proposal is quite reliable as it directly derives from an evaluation of their pros and cons: this evaluation is made by the legal administrator in charge of the bankrupt firm. The administrator forwards the results of his audit to the court, which uses this information to finally select the winning offer. Since there may be several offers in the case of sale as a going concern, we explore the criteria used by the court to choose the winning offer. We expect that commercial courts are primarily influenced by social norms such as employment protection.

If commercial courts follow the implicit hierarchy established by the 1st article of the French legislation, they should promote sale propositions which are more likely to maintain employment. To consider this effect, we focus on sales which involved two or more rival buyout proposals (respectively 169 and 123 proposals for the 01/25/1985 and 06/10/1994 samples). The explained variable is the probability for a plan to be chosen by the court. The explicative variables are the plan's characteristics (either accepted or refused), as reported by the administrator[41]. Several indexes were set up in order to standardize these characteristics. The first is the proposed price (out of debts), as a basis for *ex-post* financial efficiency: if the courts prioritise this type of efficiency, the relative price should positively influence their choice. The second set of variables deals with the qualities of the offer, which determine the future of the bankrupt firm and its employees with a new owner (the offer "preserves employment", the buyer is "financially strong", "experienced", or "reputable"); of course, preservation of employment is of key interest since it maintains[42] social efficiency. We use a third set of indicators for the motivation of the offer (the expected synergy, the absorption of a competitor, the diversification of business, or the increase of reputation).

[41] The administrator's report (the "*bilan économique et social*") is transferred to the court, for definitive decision.
[42] This is a commitment announced by the buyer. The buyer may not adhere to those commitments in the future (especially social ones). Such behaviour is subject to certain sanctions, especially since the 1994 reform.

Following the approach of McFadden (1974), we run a conditional LOGIT regression to model the court's choice between competing proposals. The probability is equal to one if a proposal is accepted by the court, and zero if it is refused. Table 3 presents the regression results. We observe an interesting result: focusing on the rival buyout proposals, the probability of being selected by the court increases when the offer is likely to preserve employment. All other variables are rarely significant. We do not conclude that the proposed sale price has no effect on bankruptcy courts; rather, we suggest that commercial courts consider each bankruptcy independently and that these courts choose the proposition that will save employment at the best price. To sum up, we do not find a dilemma between the protection of employees and the repayment of creditors, as we do not observe any negative relation between the variables "*Proposed sale price (out of debts)*" and "*Quality of the offer: preserve employment*". We rather find a hierarchy of objectives: social efficiency is the key elements driving the behaviour of the courts, while financial efficiency is viewed as a secondary objective.

TABLE 3

ESTIMATES OF CHOICE BETWEEN RIVAL OFFERS

Variables		Legislation 25/01/1985 (169 propositions)		Legislation 10/06/1994 (123 propositions)	
		Estimation	Prob. > c^2	Estimation	Prob. > c^2
Proposed sale price (out of owed debts)		**4.6381**	**0.1779**	**1.5782**	**0.3573**
Quality of the offer: preserve employment		**3.3980*** **	**0.0007**	**1.4821** **	**0.0202**
Quality of the offer: the buyer is financially strong		0.9664	0.1756	1.0101*	0.0836
Quality of the offer: the buyer is experimented		0.4090	0.5345	0.5952	0.3902
Quality of the offer: the buyer is reputable		0.5769	0.5463	-0.3687	0.6293
Motive for the buyout: synergy		-0.6785	0.3570	0.8334	0.2667
Motive for the buyout: absorption of a competitor		0.2600	0.7547	1.4057	0.2613
Motive for the buyout: diversification of business		1.5646*	0.0734	0.9699	0.3725
Motive for the buyout: first affair		2.4629**	0.0192	1.6003	0.1512
Motive for the buyout: increase the reputation		0.6261	0.5931	-14.5353	0.9942
Conditional LOGIT regression	**Test**	**Khi 2**	**Pr > Khi 2**	**Khi 2**	**Pr > Khi 2**
	Likelihood Ratio	41.7545	<.0001	24.4837	0.0064
	Score	33.2905	0.0002	21.4333	0.0183
	Wald	17.3933	0.0661	13.7616	0.1841

NOTE. – The table gives results of conditional LOGIT regression of rival offers when a firm was sold as a going concern. The dependent variable equals 1 if the judge accepts the offer, and 0 if he rejects it. Coefficients significant at the 1%, 5%, and 10% levels are indicated by ***,**, and *, respectively.

CONCLUSION

In developed countries, the main goals of bankruptcy law are to restructure, or to close down if restructuring is impossible; and to provide claimants (tax authorities, employees, secured and unsecured creditors) with an absolute priority rule for debt recovery. In practice, however, many differences exist in the rules that govern bankrupt firms and in the objectives of national bankruptcy codes. In this area of comparative law, several of our conclusions show that French bankruptcy courts actively protect employment at the time of the choice [1] between reorganization, sale as a going concern or liquidation, and [2] between rival offers for a sale as a going concern of bankrupt firms. More precisely, the strong correlation between the probability of continuation and legal measures engaged and the level of unsecured debt of bankrupt firms demonstrate that commercial courts seek to protect employment by promoting continuation. Furthermore, the implicit rules that govern the court's choice between rival offers for the sale of bankrupt firms confirm that social considerations have an impact on the decisions of bankruptcy courts. A further key outcome of this research is the determination of the financial cost of this bias. Reorganizations generate the highest recovery rates for all classes of creditors; the fact that bankruptcy courts seek to preserve employment through continuation of bankrupt firms does not imply a severe cost for other stakeholders. Moreover, contrary to the expected trade-off between social and financial considerations, courts engage also in measures to increase debt recoveries once continuation has been chosen. However, for sale as a going concern, recovery rates are inhibited by asset illiquidity or by the court's attempt to promote the firm's continuation (and also preserve employment) through sale at a low price.

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APPENDIXES

Appendix 1: the French bankruptcy code

Since the bankruptcy law reforms of 01/25/1985 and 06/10/1994[43], the French collective system involves two complementary court administered procedures (see Chart A1). The first aims at continuing business, either through a reorganization plan or sale as a going concern ("*redressement judiciaire*"). The second is a classical liquidation procedure of a firm's assets ("*liquidation judiciaire*")[44]. In order to reach a settlement, this procedure is not public (not all creditors are informed that the financially distressed firm is negotiating with some of its claimants) and allows the bankruptcy judge to ask for a stay of creditors' claims (in which case the procedure becomes public). Finally, the court can examine all pre-default contracts which appear suspect, in the sense that they would have voluntarily caused a reduction of the firm's value prior to filing for bankruptcy (this examination covers the so-called "*période suspecte*").

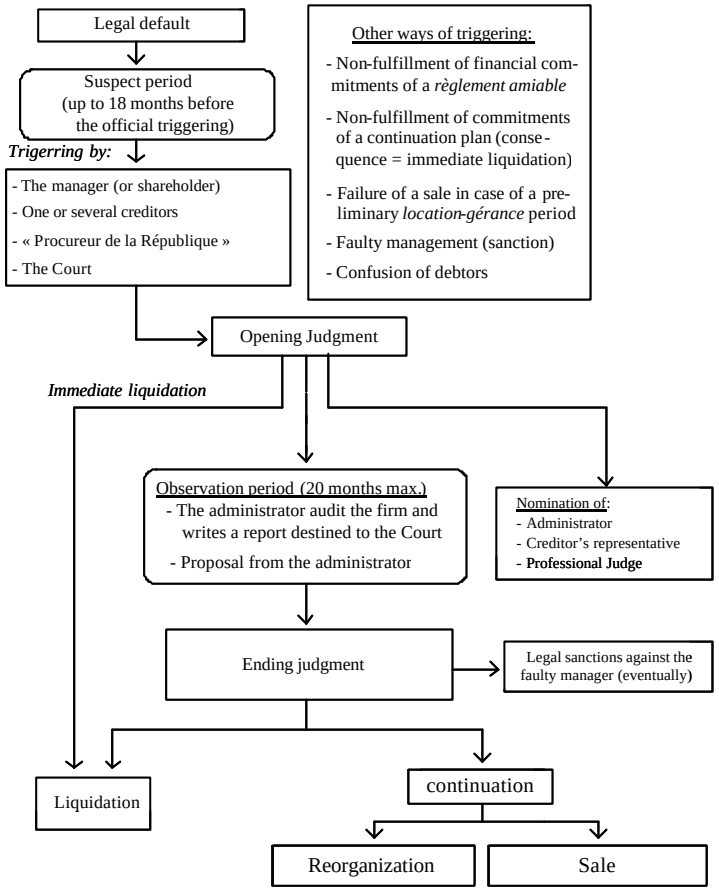
The 1994 legislation is very similar to the previous 1985 law. The main innovations in 1994 are: [1] a change in the absolute priority rule in case of liquidation (secured creditors are now paid before those creditors who offer credit after firms file for bankruptcy), [2] the judge may pursue agents who buy bankrupt firms in order to sell them piecemeal once bankruptcy process is closed; and [3] the judge can immediately liquidate financially distressed firms if he considers it impossible for them to continue their operations under the protection of the law (this procedure was in practice before 1994 but was not written in the law). These changes in the law did not crucially modify the practice of commercial courts. More importantly, we expect that firms which filed for bankruptcy after the 1994 bankruptcy reform, are more likely to be worth saving, because commercial courts promote prevention among financially distressed firms in the later sample (for instance, *via* the alert procedure[45]). In other words, it is specifically the legal difference that we consider (and test) between our two samples of bankrupt firms.

[43] In January 2006, French bankruptcy law was changed to allow for easier bankruptcy filings. These may now be initiated voluntarily by managers, creditors or the court, even if the financially distressed firm is not "*en cessation des paiements*". In the previous bankruptcy system, financially distressed firms had to be largely unable to pay debts before they could file for bankruptcy. Since 2006, all firms that face the possibility of going bankrupt in the future may initiate a bankruptcy filing. However, the data are not available yet to cover this last reform.

[44] In the shadow of the process, there also exists an out-of-court settlement ("*règlement amiable*"): the manager, with the help of an appointed officer, negotiates with some of the claimants the payment of outstanding debts.

[45] *Via* the alert procedure, a court may force a company to engage restructuring measures to reduce the risk of bankruptcy. The court may also propose an out-of-court settlement such as the "*règlement amiable*".

Chart A1. 1985 and 1996 legal framework of the French bankruptcy code



The liquidation procedure

The liquidation process occurs either immediately or after an observation period[46]. Once the court has ordered liquidation, the commercial court appoints an official who liquidates all the firm's assets to clear debt in an orderly manner. The proceeds are distributed in the following order: the most recent salaries are paid first (super privilege), following by administrative expenses of the collective procedure, other salaries and claims of tax authorities (privilege). Then the liquidator cancels secured debts, which are ranked above the post default creditors[47] (protected by "article 40" of French bankruptcy law). Any remainder goes to junior claimants.

[46] The objective of the observation period is to seek another way to alleviate financial distress.

[47] The reform of bankruptcy law in 1994 changed this absolute priority order; before 1994, creditors protected by article 40 were paid before the secured creditors in all bankruptcy cases. The French legislators aimed, with the reform of 1994, to improve secured creditor's rights.

The continuation procedure

Continuation prevails when the commercial court estimates that a firm might be able to reorganize or to be sold as a going concern. At this time the judge stops all creditors' pursuits in order to facilitate reorganization, because the firm's assets, collateralised or not, are essential to continuation. During this observation period (which starts when the court orders the stay on creditors' claims, for up to six months), several measures are engaged. All creditors who offer new credit (called new money) have priority over the previous creditors, except when the firm is liquidated (see above). The debtor may either stay in place under the authority of the bankruptcy judge, or be replaced. An official, appointed by the court, formulates a reorganization plan (causes of default, measures for carrying on, schedule of repayment of creditors), which is evaluated by the judge. After an examination of the interest of the various parties, the bankruptcy judge specifies whether the company should be reorganized according to the continuation plan elaborated by the outside official, or whether assets should be sold to a third party. In the latter case, the contracts, which are essential for the firm to continue as a going concern, are also transferred. In the event of continuation, the super-priority status of the last unpaid salaries still applies. These debts rank above all others, which are ordered as follows: "*article 40*" debts, privileged debts (other salaries, tax authorities, and bankruptcy costs), secured debts, and finally junior claims.

Appendix 2: Sample structure, and comparison of Parisian and French bankruptcies

Graph A1 shows the time repartition of the sample since year 1991. The first sample is for bankrupt firms under the 01/25/1985 bankruptcy code: it covers 6 years (1989[48]-1994). The second sample gathers corporate bankruptcy files triggered off after the 06/10/1994 reform: it covers 11 years (1995-2005). On purpose, our samples contain fewer observations for the years 1993-1995 as these years cover a transition period between two different legal regimes.

[48] Files before year 1989 were excluded from the sample, as less data were available for these years.

Graph A1. Time repartition of both samples

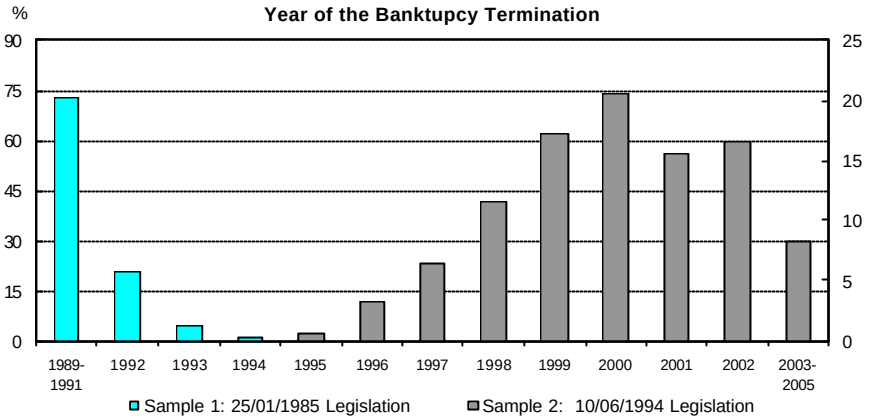


Table A1. Comparison of Parisian and national populations

Corporate bankruptcies	Paris		France	
	1994	2005	1994	2005
Limited responsibility	78.2	84.4	60.8	68.0
Other legal forms	21.8	15.7	39.3	32.0
Commerce	27.3	25.6	28.9	27.0
Industry(1)	31.9	34.0	33.7	35.2
Services(1)	40.9	40.4	37.4	37.8
Continuations (reorganizations and sales)	7.1	5.6	7.0(2)	11.0
Liquidations (immediate or not)	92.9	94.5	93.0(2)	89.0

Sources: France: INSEE; Paris: Paris Commercial Court.

(1) Agriculture, and financial services excluded.

(2) For year 1995: see J. Domens, "Les défaillances d'entreprises entre 1993et 2004", coll°. "PME/TPE en bref" n°23 (May 2007), Ministère de l'Economie, des Finances et de l'Emploi.

Appendix 3: Structure of the templates and codification of the origin of default and of engaged legal measures

Table A2 provides the general structure of our templates. The table collects 230 variables gathered into 7 different groups. Group 1 identifies the bankrupt company / group of companies. Group 2 gathers variables describing the bankruptcy process and the origin of default. Group 3a identifies the type of procedure – from triggering to final outcome. Group 3b provides financial information on assets and liabilities according to the type of claim. Group 3c codifies the measures enacted by the court during the observation period. Group 3d deals with the amounts recovered and the characteristics of buyout proposals (if any). Group 3e specifies legal sanctions against the managers (if any).

Table A2. General structure of the templates

1. Company's identification	3b. Financial information and bankruptcy costs
Matriculation number	Declared market values of assets (triggering time).
Sector (French NAF national codification)	Verified claims by levels of priority (end of the procedure)
Geographical localization	Number of creditors.
Number of employees	Bankruptcy costs individual estimation (décret 85-1390 of the 12/27/1985)
Legal form	**3c. Engaged measures / legal measures**
Creation date	Engaged measures during the bankruptcy procédure (up to 10), each of them is subject to the Court approval.
Manager(s): age, functions, nb. of administrators…	Identification of the legal practitioners
2. Process of default	**3d. Procedure outcome**
Origin of default (up to 10 cumulative causes, based on a specific codification (51 codes). The identification of causes stems from an audit engaged by the administrator.	Realized value of assets (if liquidation)
3. The bankruptcy procedure (from triggering to the final issue)	Characteristics of the buyout plan(s) (if any), in case of a sale as a going concern (price, pros and cons of the offer, as analyzed by the legal administrator)
3a Type of procedure	Characteristics of the reorganization plan (length of the plan, repayment schedule…)
Type of the legal procedure (simplified or not)	**3e. Legal sanctions against managers (if any)**
Date of triggering and of ending	Suspect period
Identity of the bankruptcy's initiator	Pecuniary sanctions
Legal issue: liquidation, sale, reorganization	Extra pecuniary sanctions
Remark: all files are closed files (with definitive recovery rates).	Type of fault

Table A3 sets out the codifications we used for the causes of default and the measures enacted. They are gathered into 8 groups: outlets, strategy, production, finance, management, accident, and external environment.

Table A3. Codification of the causes of default and the engaged measures

	Origin of the default (codifications)	Measures engaged by the administrator during the bankruptcy procedure (codifications)
Outlets	[1] Brutal disappearance of customers; [2] Customer(s) in default; [3] Product(s) too expensive (selling price is too high); [4] Bad evaluation of the market; [5] Product(s) too cheap (selling price is too low); [6] Unsuitable products; [7] Obsolete products; [8] Loss of market shares (regular fall of the firm's demand).	[1] Improvement of products (extension of the range); [2] Innovation, increase of research and development; [3] Advertisement, better knowledge of the market, commercial effort; [4] Lower selling prices; [5] Reorganization of activities (abandon of unprofitable activities, development of the more profitable ones).
Strategy	[1] Youth of the company (inexperience); [2] Voluntary dissolution of the activity;[3] Failure of important projects (partnerships, investments, reorganizations);[4] Voluntary acceptance of little profitable markets (dumping...).	[1] Diversification of the economic partners; [2] Concentration on peculiar economic partners; [3] New shareholder in the capital; [4] Non renewal of peculiar contracts (non profitable markets); [5] New hiring.
Production	[1] Production capacity was too strong, overinvestment; [2] Depreciation of assets(active persons); [3] Operating costs were too high (other than wages: external expenses, raw materials...); [4] Wages expenses were too high; [5] Brutal disapearance of suppliers; [6] Unsuitable process of production (obsolete); [7] Under-investment.	[1] New investments; [2] Cancellation of projects (investments); [3] Economic reorganizations (mergers and acquisitions, partnerships, alliances); [4] Increase of selling price; [5] Decrease of operating costs; [6] Firings; [7] Decrease of wages.
Finance	[1] Longer delays on accounts receivable; [2] Contagion / reported losses from subsidiaries; [3] Shorter delays on accounts payable; [4] Speculation of the company, problems due to exchange rates fluctuation; [5] Stop of the financial support from the head office / holding; [6] Lack of equity (compared to leverage/liabilities); [7] Loan refusal to the company; [8] Stop/reduction of previous State financial subventions to the firm; [9] Contractual interest rates are too high.	[1] Obtaining public subvention(s); [2] Sale of fixed or financial assets; [3] Sale / liquidation of inventory; [4] Recovery on accounts receivable; [5] Raise of stockholders' equity; [6] Decrease of the financial risk (less speculation…); [7] Total or partial repayment to previous creditors; [8] Rescheduling of payments, remissions of a debt (private renegotiation); [9] Attempt of informal renegotiation; [10] Cash raising from new creditors; [11] New loans; [12] Claims forgiveness from the leaders / owners.
Management	[1] Weak accounts reporting / informational system is deficient; [2] Problems of competence; [3] Disagreements among the directors / managers; [4] Excessive takings from the managers; [5] Insufficient provisions; [6] Lack of knowledge on the real level of costs of returns (causing too weak selling); [7] Bad evaluation of inventory; [8] Problems of transmission of the company / difficulties in restructuring.	[1] Improvement of the competence (training, hiring of skilled persons); [2] Appeal to outside experts; [3] Substantial change of the managerial staff; [4] Change of the rules of accounting (or of the rules of management); Management: Better knowledge of the costs of returns.
Accident	[1] Swindle / embezzlements affecting the company (whatever its origin); [2] Another insolvency procedure (for other companies) is extended to the firm (same patrimonies); [3] Disputes with public partners (fiscal inquiry); [4] Disputes with private partners; [5] Death / disease / disappearance of the manager; [6] Disaster; [7] Social problems within the company.	Non applicable
External environment	[1] Unfavorable fluctuation of the exchange rates; [2] Increase of the competition; [3] Decreasing demand to the sector; [4] "Force majeure" (war, natural catastrophe, industrial crisis, politics, bad price evolution); [5] Public policy less favorable to the sector; [6] Period of credit crunch; [7] The general level of interest rates is too high; [8] Macroeconomic increase of operating costs (raw materials, GMW…).	Non applicable

NOTE. – The table lists the principal origins of default and the legal measures enacted by the administrator during the bankruptcy process. We set against each other the causes of default and the measures enacted by the court in order to determine whether they are connected. We also set the exogenous origins of default (accident, external environment) against the endogenous ones (strategy, production, finance or management).

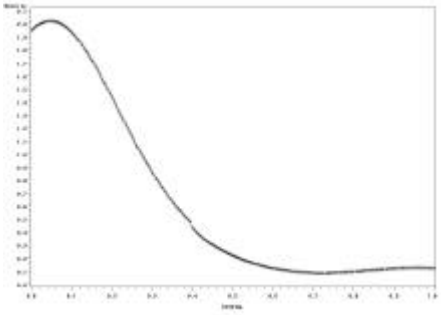
Table A4 provides the repartition of the causes of default, per outcome, and the results of ANOVA tests: averages differ significantly between outcomes at the 1%, 5%, and 10% levels when the Fisher statistic is tagged with ***,**, and *, respectively.

Table A4. Repartition of the causes of default

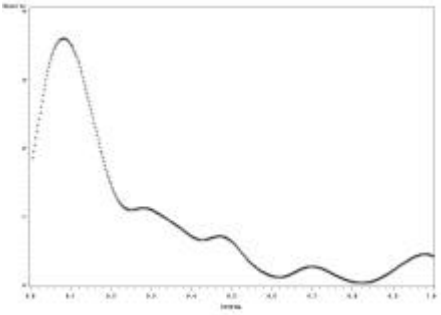
Causes of bankruptcy (% of affected firms)	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	Total (weighted)	ANOVA test: Fisher stat.	Sale	Reorgani-zation	Immediate liquidation	Liq. after observation	Total (weighted)	ANOVA test: Fisher stat.
	Sample: Bankruptcy Law 25/01/1985						Sample: Bankruptcy Law 10/06/1994					
Outlets	50.0	44.2	43.2	60.9	*44.0*	1.13	55.6	46.6	56.1	67.9	*56.5*	1.06
Finance	53.3	31.6	25.8	40.2	*26.7*	2.15*	24.4	26.1	23.2	25.0	*23.4*	0.56
Accident	22.1	28.4	26.5	31.5	*26.7*	0.85	24.4	33.0	19.5	25.0	*20.4*	0.64
Production	36.1	40.0	16.2	26.1	*17.0*	6.38**	28.9	25.0	14.6	35.7	*16.6*	0.97
Environment	31.1	28.4	20.6	30.4	*21.2*	0.28	41.1	45.5	12.2	46.4	*16.0*	3.07**
Strategy	19.7	11.6	11.8	21.7	*12.3*	0.88	16.7	12.5	13.4	21.4	*13.9*	0.16
Management	30.3	27.4	21.9	27.2	*22.2*	1.15	15.6	9.1	11.0	14.3	*11.2*	0.21
Nb. of causes per firm	3.2	2.8	2.0	2.9	2.1	-	2.3	2.2	1.8	2.8	1.9	-

Appendix 4: Density functions of the recovery rates

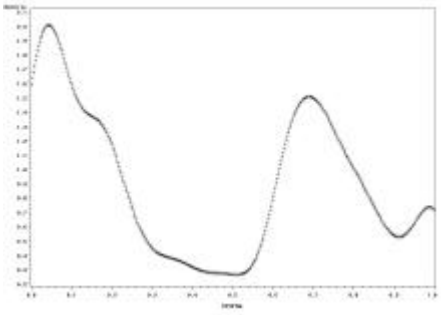
01/25/1985 legislation sample: liquidations



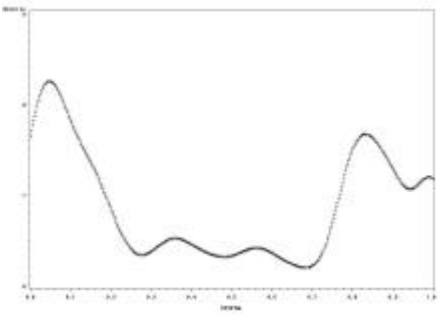
06/10/1994 legislation sample: liquidations



01/25/1985 legislation sample: continuations

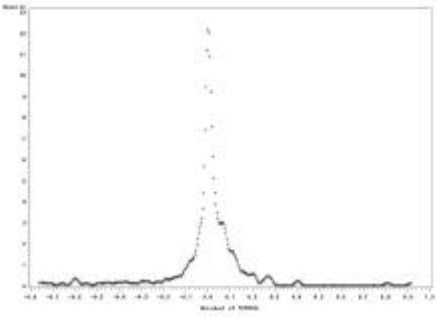


06/10/1994 legislation sample: continuations

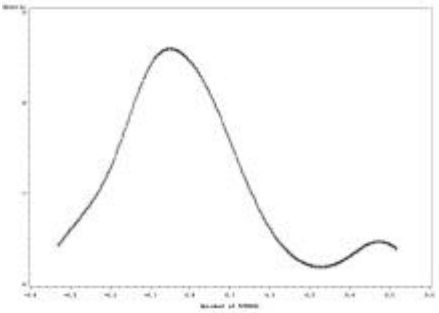


Appendix 5: Density functions of the LOGIT residuals (see Table 4)

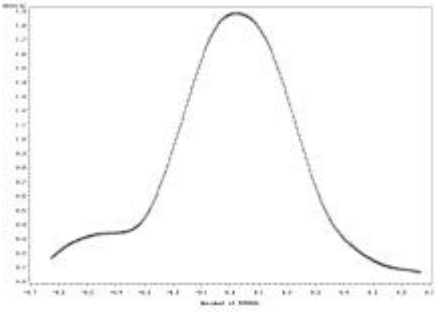
01/25/1985 legislation sample: liquidations



06/10/1994 legislation sample: liquidations



01/25/1985 legislation sample: continuations



06/10/1994 legislation sample: continuations