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Does the law alone explain the rise in bankruptcies in XIXth century France?

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Does the law alone explain the rise in bankruptcies in XIXth century France?

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This paper is the first result of a project aiming at understanding the history of bankruptcy law from an empirical economic perspective[1]. The importance of bankruptcy in economic life is well known; nevertheless, little discussion of bankruptcy is to be found in economics textbooks. Bankruptcies are discussed in the daily economic debate, but more when big firms fail than on a careful analysis of bankruptcy statistics. Some proponents of "law and economics" (e.g.La Porta & alii, 1998) recently resuscitated the old lawyers' claim that the impact of bankruptcy law on national economic performance is important, but their argument is mainly based on the comparison of allegedly autonomous legal traditions, with little consideration for actual practices or for legal transformations in the long run. Our position diverges from their: as in the "20th century divergence" debate in international relations (James, 2001) or in financial systems (Rajan & Zingales, 2003), we believe that bankruptcy laws in XIXth c. Europe were much more homogeneous than frequently assessed (following Sgard, 2005), and that legal changes on that subject were important and the subject of intense debate (as today, see e.g. Pagano, 2001); more importantly, we propose to examine the interaction between law and practice, since we believe that court practices could precede and not always follow legal changes, and that, even in a civil-law country like France, court practice could vary substantially from a simple application of the law.

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Empirical studies of the history of bankruptcy focus on simple variables in order either to discuss the relationship between the number of bankruptcies and the business cycle or the demography of firms (e.g. Marco, 1989), or to assess the efficiency of the judicial system in terms of cost or length of the bankruptcy procedure (di Martino, 2005). We believe that an empirical assessment of bankruptcy must start with economic agents' behaviour, which will determine how many debtor-creditors relationships will end-up in court, and how many will be settled outside the court (Klapper, 2001). This simple question, which is not usually discussed, is a precondition for any interpretation of aggregate bankruptcy statistics.

In this paper, we try to measure the impact of the changes in French bankruptcy law in the XIXth century focusing on the behaviour of economic agents as users of bankruptcy law for the sake of finding the best solution to their economic problems. Debtors used bankruptcy law in order to minimize their debt level when facing difficulties in servicing it, but they had to convince their creditors and/or the courts of their good faith, and faced the adverse effects of bankruptcy on their reputation and on the smooth functioning of their business. Creditors used bankruptcy law in order to force their debtors to pay, if they could. Judges – who in the French system of specialized commercial courts were elected entrepreneurs – applied the law within a specific economic context (both a specific local context and at a specific moment in the business cycle) which could affect them. Other actors also participated the procedure with their own interests and objectives.

We use a new and still incomplete database constructed using both the yearly official statistics produced by the judicial system and individual bankruptcy files from the Paris commercial court (Tribunal de commerce) archives in order to measure actual practices.

The first part of the paper presents the evolution of French bankruptcy law during the XIXth century in its historical context. The second part briefly describes the theoretical model we use in order to understand the choices facing debtors and creditors in the face of financial distress. The last part proposes some major stylized facts concerning bankruptcies during that period and tries to understand their relationship with the legal evolution described before.

I. Legal history of bankruptcy

Bankruptcy law occupies around one third of the 1807 Code du Commerce, which defined some of its major characteristics for the entire century. Bankruptcies were under the responsibility of the Commercial courts, which judges were elected among notable commercial merchants in each resort. Appeal was reserved to civil courts, which made Commercial courts a specialized jurisdiction under the responsibility of civil courts. Nevertheless, Commercial courts were quite independent in practice, and commercial law was quite distinct from civil law. Similarly, bankruptcy procedure was separated from the judgment of its possible delinquent

or fraudulent origins which were the responsibility of penal courts under the name of *banqueroute*. Commercial courts were the privilege of merchants (*commerçants*), including every person usually selling goods or services, but excluding farmers, professionals, wage earners and civil servants.

Bankruptcy (*faillite*) was defined as the state of having stopped payments (*cessation de paiements*), but the procedure was started only by a judgment stating that a person or a company (*société*) was in that situation. The procedure could be started either at the initiative of the bankrupt himself (by producing his balance sheet, so the usual name *depôt de bilan*), by his creditors (*requête*) or by the court itself (*d'office*). The bankrupt was jailed, the judge named a trustee (*syndic*) responsible for the management of the procedure in the interest of the creditors, which included either finding an agreement with the creditors allowing the perpetuation of the firm (*concordat*) (which usually included a reduction and new schedule for the debts) or organizing the liquidation of the assets (*union*). The procedure started with a verification of the assets and liabilities of the bankrupt firm, which could lead to an immediate stop if assets were insufficient to cover the costs of the procedure itself, in which case the case was settled as *insuffisance d'actif*. It then divided creditors in privileged and normal ones. The normal situation was to pay all privileged debts first, and then grouping the normal creditors in the *masse* who had to decide on the *concordat* on a majority basis.

Established under an authoritarian government aiming at stabilizing a society much affected by the revolutionary years, and especially at re-establishing traditional authorities and property based wealth at the top of society, the 1807 code was considered as excessively severe and inefficient by many contemporaries and the courts themselves. It had an excessive recourse to jail, made difficult reaching a *concordat*, and the procedure was excessively slow and costly. It was probably efficient in making bankruptcy a threat to all traders, but not in protecting the interests of the creditors, and less so in allowing unlucky traders having a fresh start, since, except under a concordat, all assets they could accumulate later could always be seized under their bankruptcy case, and they remained marked with the infamous seal of bankruptcy (and deprived of all political rights) until a very unlikely *réhabilitation* which supposed a complete reimbursement of all debts with interest. Furthermore, debtors facing payment difficulties tried to avoid the courts by settling their case privately with their creditors, something which frequently led to inequalities among creditors or even fraud, sometime also to belated recourses to the courts with chaotic consequences.

These problems, as stated by contemporaries including the novelist Balzac in his famous *César Birotteau* and many the *Saint-simoniens* (liberal innovators with notable influence in finance and politics) became unacceptable under the more liberal regime after the 1830 revolution. This led to a major change in the law in 1838, which facilitated the conclusion of *concordats* for bankrupts of good faith (especially if they had initiated the procedure by producing early their balance sheets) and allowed the courts to decide that even bankrupts under *union* were *excusable* (and regained normal commercial rights – but not all political ones). The procedure was simplified, tax costs were decreased, and the *syndic* was given the right to manage the

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business of the bankrupt (with his help if necessary) in order to maintain the value of what was being increasingly considered as the creditors' main implicit guarantee.

Further changes led in the same liberal direction. In 1856, the *concordat par abandon d'actifs* gave the possibility to the bankrupt who benefited it to restart a new business without having to fear that his new assets could be seized in order to compensate his creditors. In 1867, the *contrainte par corps*, i.e. the jailment of the bankrupt was suppressed. In 1903, the possibility of obtaining a full *réhabilitation* was made easier.

More importantly, following two tentative provisory legislations under the special circumstances of the 1848 revolution and the Franco-Prussian 1870 war, a special procedure was created under the name *liquidation judiciaire* in 1889, which allowed the settlement of bankruptcy cases without the still infamous name of *faillite*. That new procedure was supposed to be reserved to bankrupts of good faith which situation was the result of unlucky exogenous circumstances, and who had initiated the procedure. Then it was supposed to end-up in a *concordat*, although *union* and *insuffisance d'actifs* were also possible.

In sum, the evolution of bankruptcy law in France followed a liberalizing pattern, like in most other European countries and more or less at the same time (Sgard, 2005). The requirements of economic efficiency, especially the need to provide for the maximum repayment to creditors, for the continuity of all existing "good" firms and for the fresh start of unlucky entrepreneurs, became more important than the need to sanction any borrower unable to repay its debts and to exclude him from the community of merchants. Nevertheless, ex-ante incentives to repayment remained high since *concordat* never became a right (so that many bankrupt merchants lost entirely control over their assets) and *faillite* became something infamous until today. In all these dimensions, French bankruptcy law accompanied the development of capitalism (Ripert, 2004).

II. A model of merchant's behaviour under bankruptcy law

Our main theoretical claim here is that bankruptcy is not a clear-cut common knowledge fact, a situation in which a firm is and one that the court can recognize and settle. To enter a bankruptcy procedure is a choice which depends partly from the situation of the firm as known by the actor making the choice, partly from what he expects from the decision to enter the procedure, which depends on bankruptcy law and the behaviours all other actors concerned. This "realist" epistemological choice leads to emphasize the strategic

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and the information dimensions in the bankruptcy process, as well as the characteristics of the legal system and the economic environment[2].

We will simplify the model by supposing that the choice to enter a bankruptcy procedure is either made by the debtor or the creditor, letting aside those cases when the courts take the initiative (less than 10% of all cases during our period). One can consider the start of a legal case as the default situation since both sides must agree on a private settlement (and actually all creditors, as we saw) when a single side can impose the legal procedure.

The choice for a debtor lacking liquidity was between borrowing more, filing for bankruptcy and asking his creditors for a private settlement. We suppose that the debtor could not borrow anymore when he faced that choice. Concentrating then on the last two solutions, we can consider that the private settlement was superior for him in terms of reputation (nobody knew of it except the creditors) and in terms of transaction costs; it also did not bring the risk of the death and liquidation of the firm if no concordat could be obtained. Nevertheless, if there was a conflict among the firm's partners (*associés*) because of asymmetric information among them, it was less likely that a private settlement would be accepted by all of them. It was also probably inferior in terms of the debt reduction that could be obtained at least inasmuch as it maintained the information asymmetry between the debtor and the creditors[3]. The main difficulty was to obtain the agreement of all creditors, since no single debt could be reduced without the agreement of the creditor concerned (who could always sue for bankruptcy).

The choice for the creditor was not entirely symmetric. He also preferred the survival of the firm, but only if the actualized value of the flow of payments it would make was likely to be superior to the present value of its parts. Both a private settlement and a concordat would allow for a survival. The differences between them were the procedure cost and the agency costs. The procedure cost made the creditor prefer a private settlement; the agency cost with the debtor made the creditor prefer the bankruptcy procedure, which would provide him with information on the actual situation of the debtor allowing him to adjust the debt reduction to the exact need of the debtor. Furthermore, a legal procedure protected the creditor against differences in information among creditors and the risk that some creditors may obtain privileged access to the firm's funds, since equality among non legally-privileged creditors was a basic principle of bankruptcy law. In sum, the legal procedure can be seen for the creditor as an option allowing him to ask for the liquidation of

[2] The realistic approach differs profoundly from the idealistic approach of finance theory which leads to such optimal systems such as those proposed for example by Aghion & alii, (1992) or Hart & alii, (1997), which suppose that the value of the firm is independent from who controls it, when in the period under study almost all firms were entirely dependent from their owner-manager, and, correspondingly, the bankruptcy procedure did not provide any instrument allowing for the transfer of control of an existing firm.

[3] We suppose that this information asymmetry would never be suppressed under private agreements given the lack of reliable common-knowledge accounting systems during that period, and the cost of transferring the adequate information in the case of small businesses.

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the assets (but only under a majority vote procedure) in the case an agreement cannot be reached with the debtor and the other creditors. The value of such an option increases with the probability of such a liquidation, with the uncertainty of the debtor toward the actual situation of the firm and with the risk of a conflict with other creditors; its price is the cost of the bankruptcy procedure.

As a conclusion, we can consider that the choice between private settlement and legal procedure resulted mostly from:

- The actual situation of the firm (the probability of a legal procedure increasing when the situation of the firm worsens);
- the information asymmetry among the firm's partners, between debtor and creditor or among creditors (the probability of a legal procedure increasing with these asymmetries);
- the relative costs of the two procedures (the probability of a legal procedure decreasing with its cost);
- the cost for the debtor of the start of a legal procedure: reputation cost in particular (the probability of a legal procedure decreasing with that cost);
- the difference between the value of the firm as a going concern and the value of its assets (the probability of a legal procedure decreasing with that difference);
- the risk of not agreeing on a *concordat* for a given situation in the case a legal procedure was chosen (the probability of a legal procedure decreasing with that risk).

Furthermore, it is likely that the choice of a legal procedure would be made by the debtor the more frequently the less dangerous it was for him in terms of reputation and risk of future liquidation, when the firm's situation was relatively good and the asymmetry in information with the creditors and among creditors were low as well (so the risk not to obtain a *concordat* was low). The creditors' initiative of a bankruptcy procedure would appear when the option value would be high enough. Both would be incited to go to the court by a reduction in the procedure cost.

Once a bankruptcy procedure started, creditors and debtors could again choose between a *concordat* and a *union*, but they had to agree on a *concordat* for it to be accepted when each of them could impose a *union* (with the proviso that the creditors' decision was based on majority, not unanimity). The advantages of the *concordat* are obvious, since it allowed the debtor to keep control and escape the most infamous aspects of the *faillite*. But the *union* could free the debtor from all its debts (although it was not legally the case), and provided the creditors with low but immediate and risk-free dividends. Again, transaction costs and information asymmetries would intervene in the choice. So among bankruptcies, the probability of a *concordat* being chosen was:

- increasing with the actual situation of the firm;

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- increasing with the difference between the value of the firm as a going concern and the value of its assets;
- decreasing with information asymmetries between debtor and creditors;
- increasing with the cost in reputation of the *union* vs the *concordat*;
- increasing with the relative procedural cost of the *union* vs the *concordat*.

Below, we use that simple model to understand better bankruptcy data.

III. Empirical approach to bankruptcy

When willing to measure the impact of bankruptcy law not only from a theoretical point of view but with empirical data, a major difficulty is the absence of data on those private settlements that we considered as a major alternative to a bankruptcy procedures in the previous section. We will handle this by wondering whether the main changes in the bankruptcy data can be explained within the framework we presented. Next, the main question will be how to distinguish the effects of the law from those of other variables affecting bankruptcies. The question is the more difficult since changes in the law were frequently anticipated by court decisions (sometimes for a long time), but could also be delayed by reluctant courts, something that will make econometric estimates on yearly data little satisfactory. In this paper, we will concentrate on long run changes from 1820 (or at least 1840) to 1913 and on the broad changes in the law that we presented before.

A last question which is clearly important for a long run analysis like this one is the endogeneity of bankruptcy law. Both political economy theory and archival records suggest that all participants in the bankruptcy procedures (mostly merchant communities as organized in chambers of commerce or more specific lobbies, and the legal professions) tried to modify the law in their favour. And the law was actually modified, as we discussed in part 1. But we will discuss this in another paper.

Here we will start from the main changes in the law and from the model of debtor and creditor choices sketched above in order to understand the main stylized facts of bankruptcies. Before that, we describe briefly our sources.

1. Source

Sources on bankruptcies are abundant, actually too abundant since the files of thousands of bankruptcy cases have been conserved in the courts' archives (kept in the *Archives départementales*). A statistical summary of the procedures was published yearly starting in 1840 by the Ministry of Justice under the title *Compte général de l'administration de la justice*. It provided for every court the number of cases opened and closed in the year, the number of cases pending at the start and the end of the year. It also gave either at the court

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level, at the judiciary resort level or at the national level (depending on the year) the number of cases by origin (who initiated the procedure), by end (*concordat*, *union*, etc.), by age (since how long are opened the cases not yet closed at date t), by size class of liabilities and assets, by composition of assets and liabilities (privileged vs normal debts, property vs other assets), and the importance of dividends obtained by creditors in the case of *concordat* or *union*.

This very rich source provided both variations among time and, to some extent, among courts, allowing a detailed exam of the variables included. Nevertheless, except in some rare cases, it did not include data allowing linking the characteristic of failed firms with the result of the procedure concerning them. This is where individual cases can help, and where the archival records are useful, since they allow precisely to establish whether (for example) bankruptcy cases initiated by the debtor (or debtors with particular characteristics) ended up more frequently in *concordat* (and, in this case, with a higher dividend), or in the case of *union*, with a higher proportion of *excusabilité* or a higher dividend. Furthermore, the individual archives allow us to observe discrepancies between the law and the practice of the courts, and to understand how the statistics were constructed and then their limitations.

We compiled from these individual files (which size varies heavily, but which contain at least all the official documents corresponding to the steps in the procedure, including a frequently rich report by the syndic) at database including all the procedure's steps, with their dates, details on the balance-sheet and the number of creditors, modifications to the balance-sheet made by the syndic in his report, and the cost of the procedure from the syndic statement at its end. At the moment, this database included 60 bankruptcy files for 1850 and 77 for 1899, all from the Parisian Tribunal de commerce.

2. The number of bankruptcies: can the law explain it all?

The number of new bankruptcy procedures opened within the year increased sharply in France during the 19th century (graph 1). That increase was more important than those of both GDP[4] (2.4% vs 1.6% yearly increase from 1820 to 1913) and the number of firms (0.8% from 1827 to 1913, see Jobert, 2001, p. 35). In more detail, one must remark that, once the new bankruptcy law of 1838 was established, and except for the special legislations that affect the 1848-53 and the 1870-71 periods (the special procedure of these periods did not enter the statistics), the increase in the number of bankruptcies was relatively stable from the 1840s to the 1880s. Later on, the number of bankruptcies stabilized even when the new *liquidations judiciaires* are included in the statistics (as they are in the above line in the graph); the absolute maximum for the total was reached in 1898 with almost 10,000 new procedures.

[4] The number of bankruptcies should increase with GDP if the size of firms was fixed.

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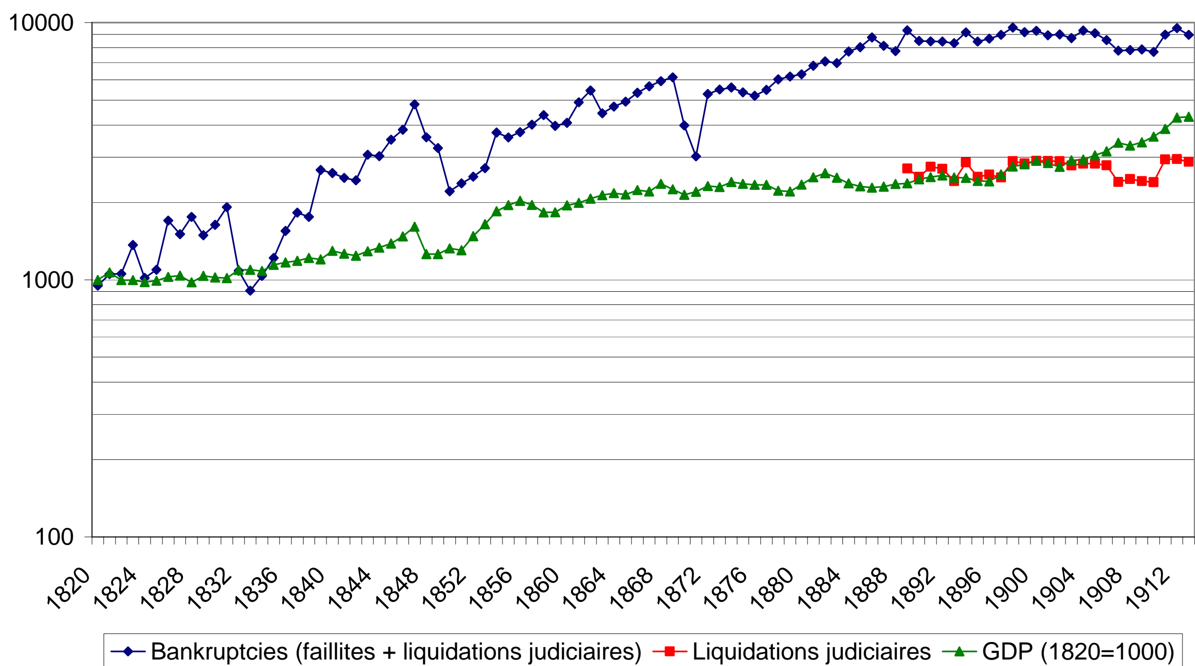
Total bankruptcies, liquidations judiciaires, and index of GDP



Sources: *Compte général de l'administration de la justice* (various years) for bankruptcies; Lévy-Leboyer & Bourguignon (1985) for GDP.

Why did the number of bankruptcies rise so rapidly during the century? Why did it stagnate from the 1890s on? Because of the incompleteness of our database, we can at this stage only discuss the first, long term, question. The liberal evolution of bankruptcy law has been heralded (Marco, 1989) as the reason for the increase, and we will here discuss in detail that hypothesis. Let's just start with two remarks:

- The legal explanation looks in contradiction with the stagnation of the last part of the period: the creation of the *liquidation judiciaire* in 1889 was the most important step in the liberalization of bankruptcy law, and as such should have prompted an important wave of new bankruptcies. Instead, we observe a sharp decline in the rate of growth of the number of bankruptcies after 1889 (from 3.7% a year in from the 1870s to the 1880s to 1.7% a year from the 1880s to the 1890s and zero thereafter).

- If the rise of the number of bankruptcies reflects only the evolution of the bankruptcy law, that is if the proportion of firms with liquidity problems is stable during the period, then the 9 fold increase in the number of bankruptcies compared to the 2 fold increase in the number of firms (supposing this number is independent from bankruptcy law) implies that the proportion of firms with liquidity problems that made

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private settlements was very high (above 80%) early in the period. Otherwise the number of bankruptcies would exceed the number of firms with liquidity problems at the end of the period[5].

Nevertheless, it is worth examining whether the legal explanation is consistent with the other stylized facts we have about bankruptcies.

Legal changes and the composition of bankruptcies

The composition of bankruptcy procedures helps testing whether the legal evolution played a major role in the long run evolution of bankruptcies or not. The legal evolution was intended to incite debtors to go to courts instead of waiting for an amelioration of their situation or looking for private settlements. In fact, as we observed in section 1 and 2, the evolution of the bankruptcy procedure decreased the sanctions toward the debtor and favoured his attempts at starting new businesses, inciting him to go to the court more easily than before. For sure, it also incited creditors to sue more rapidly because it decreased their bargaining power towards debtors in private settlements, but this impact was likely to be of second order in comparison with the impact on debtors.

Yet what the statistic tells us is very different: the proportion of bankruptcy cases started at the initiative of the debtor decreased during all the century, from around 60% in the 1830s and 1840s to around 45% on the eve of the First World War (20% for *faillites* alone, 100% by definition for the *liquidations judiciaires*). Since the proportion of those started by the courts was fairly stable, the creditors initiated an increasing proportion of the cases. Unfortunately, we don’t know yet the precise chronology of this evolution, but the long term trend is quite clear, and contradicts the pure legal origin theory of the increase in bankruptcy cases.

Better procedures

A look at the evolution of procedural costs can help explaining that paradox. These costs were presented during all the century as the most important obstacle toward the recourse to the courts by debtors and creditors alike. They were mostly (if not entirely) independent from the legal evolution itself. For many creditors, the most important of these costs was actually not a financial cost, but the delay between the start of the procedure and the end, since it entailed uncertainty and loss of time. We can calculate various measures of the evolution of that delay. First, the proportion of cases judged within a year as a proportion of those existing at the start of the year plus those started during the year rose steadily from around 35% during

[5] To understand this, suppose that 50% of firms with liquidity problems are subject to bankruptcy procedures in the 1820s. Then, when the total number of firms doubles, the number of firms subject to bankruptcy can only increase 4 fold, even if it reaches 100% of the total number of firms. This suggests that for the number of bankruptcies to increase 9 fold, it cannot exceed 20% (precisely 100% / (9/2) = 22.2%) of all firms with liquidity problems at the start of the period. Actually, since it is unlikely that all private settlements disappeared, the proportion must have been even smaller.

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the 1840s to 55% after 1900 (a proportion similar for *faillites* and *liquidations judiciaires* during that last period). The proportion of the cases existing at the end of a year which had been opened for less than 6 months reached 40% in the 1900s. Our sample confirms these statistics: for the firms included, the median procedure duration decreased by almost half (from 7 to 4 months) from 1850 to 1899. Furthermore, if the duration for reaching *concordats* did not decrease (it actually increased slightly), that for settling entire liquidations (*unions*) decreased sharply (from 16 to 7 months), which suggests the reduction in duration is not only the result of the rise in the number of bankruptcies rapidly settled because of insufficient assets (*insuffisance d'actif*).

As concerns financial costs, most of them were related with the taxation of the official documents required at the various stages of the procedure, and with the payment of the *syndic*. In response to a constant demand from economists, the Chambers of commerce and other business lobbies, the level of the taxes was decreased several times during the second half of the century. If no aggregate statistic is available on that subject, our sample confirms that on average the expenses of the *syndics* (including their own wage) decreased as a percentage of the income they were able to bring in the bankruptcy purse. In sum, all procedural costs decreased throughout the century, which can help explaining the surge in bankruptcy cases[6].

Then our model suggests that the legal evolution can explain only a part of the story: it has to be coupled at least with the reduction of procedural costs in order to explain both an increase in the number of *dépôts de bilan* (as expected by the legislator) and a rise in the number of bankruptcies started at the creditors' initiative. The rise of the proportion of bankruptcies started at the creditors' initiative suggest they reacted more rapidly to the new incentives that the debtors did, making the outcome different from what the legislator expected.

The composition of bankruptcy outcomes

If the legal change and the reduction of procedural costs is the only explanation of the rise in the number of bankruptcies, and if, consequently, the proportion and repartition of firms with liquidity problems are stable,

[6] A last and important procedural cost should be measured: the impact of the procedure itself on the amount obtained by the creditors. At this moment, we are unable to measure it. At the aggregate level, the average dividend paid by all bankruptcy procedures closed in a given year decreased among time. Nevertheless, this cannot be considered as suggesting an increase in the procedural cost since the procedures involved were so different and their proportions changed so much. First, the dividend corresponding to a concordat is only the promise of future payments when the dividend after an assets' liquidation is an immediate and certain payment. Second, the changes in the proportion of the different outcomes makes an average dividend little significant of any procedural cost (see next section). What should be measured is the average dividend for bankruptcies sharing similar characteristics (size, procedure, outcome, etc.). For example, dividends for *concordats* alone increased slightly along the century if we follow the aggregate statistics; but this should be confirmed using our sample which will allow linking various characteristics of a bankruptcy.

one expects that the outcomes of bankruptcy procedures reflect only the increasing recourse to the courts. Can this be confirmed?

The statistics on bankruptcy outcomes give a fairly pessimistic view of the evolution of bankruptcies. *Concordats*, which should be the normal outcome of procedures started at the initiative of the debtor, decreased sharply as a proportion of total bankruptcies. Paradoxically, at the end of the period they were not even the most common outcome for *liquidations judiciaires*. From 50% of all bankruptcies in the 1840s, the proportion of concordats decreased to around 20% in the 1900s (around 10% for *faillites* and 30% for *liquidations judiciaires*). At the same time, bankruptcies closed because of *insuffisance d'actifs*, which represented 20% of all bankruptcies in the 1850s, rose to almost 50% in the 1900s (60% for *faillites* only). The rest of the procedures ended up with the liquidation of all assets (*unions*), producing usually very small dividends to the creditors.

Is this sharp deterioration of the bankruptcies' outcomes consistent with the facts we observed earlier and with the legal theory of the evolution of bankruptcies? Our model actually suggests that the liberalization of bankruptcy law, especially when reinforced by a decrease in procedural costs, should lead to the choice of a legal settlement for firms in better –not worse– shape, other things being equal. One may wonder whether this could result from a composition effect: the rise of the proportion of bankruptcies initiated by the creditors, usually concerning firms in worse shape, could explain the global rise of *unions* and *insuffisance d'actifs*. But it doesn't look possible. First, the rise in creditors' *requêtes* is small compared to that of *union* and *insuffisances d'actifs*. Second, the decrease of *concordats* and the rise of *unions* and *insuffisances d'actifs* appeared even among those bankruptcies initiated by the debtors. This results mechanically from the fact that *dépôts de bilan* still represented 45% of bankruptcies in the 1900s when concordats were as low as 20%. It is confirmed by our sample, which shows that when in 1850 almost all *dépôts de bilan* ended up in *concordat*, this was only the case for a third of them in 1899, when the proportion of *concordats* among the cases initiated by the creditors or the courts decreased to almost zero. Except if the severity of the courts increased – which would contradict the liberalization of the law– it is difficult to conciliate this deterioration of the outcomes of the procedures (whatever their origin) with anything else than a rise in the number of firms with liquidity problems. We must conclude that the evolution of bankruptcy law, even when complemented with the decrease of bankruptcy cost, cannot explain but a fraction of the rise in bankruptcies. We must look for other, real economic changes. But we will see this is not obvious either.

3. Suggestions for a real explanation of the increase in bankruptcies

An alternative explanation would be the following: the increase in bankruptcies was not the result of legal or institutional change in the bankruptcy law and courts. It merely reflected the increase in the number of firms

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with liquidity problems. Since, as we already mentioned, the number of firms did not increase much, this increase must have resulted from a rise in the proportion of firms with liquidity problems (which may reflect, as suggested by Marco, 1989, a change in the demography of firms, with higher yearly numbers of both of "births" and "deaths"). One solution would be a change in the size composition of firms, since small firms are well known for their higher bankruptcy risk. But this conflicts with the bankruptcy statistics, which tells us that the distribution of bankrupt firms by size remained very stable along time (around 20% of bankrupt firms had assets above 50,000 francs during all the century). Last, but not least, the increase in the proportion of firms with liquidity problems may have resulted from the increase in risk, leading to more frequent failures. Increased risk could take (in our view) four different forms:

- A macroeconomic one, firms suffering business cycles of increasing volatility without any choice on their part. It does not correspond to what we know from the business cycle, even if the "long stagnation" of the 1870s and 1880s was particularly severe. We won't discuss it more here.
- Second, firms may have invested in more risky projects. But there is no clear reason or indication of such a behaviour.
- Third, firms' structures may have gone more complex, providing for more risks of conflicts among partners. We already mentioned this as a reason for initiating a procedure instead of looking for a private settlement. It is clear that the proportion of firms with complex structures increased along the century. If the number of corporations was small (free incorporation was available from 1867 but the number of new corporations never rose above 1000 before 1899), other structures existed (*sociétés en commandite* and *sociétés en nom collectif*), and even very small firms with only two partners could lead to conflicts.
- Fourth, firms may have taken on more financial risk, that is more debt compared to their equity. This would correspond to an increase in credit and a decrease in credit rationing which are certainly long term features of the century. Let's discuss this hypothesis in some more detail.

Can available data confirm that bankrupt firms were increasingly leveraged as time passed? Actually, the ratio of assets to liabilities for all bankrupt firms decreased from the 1840s to the late 1880s, going from around one third to one fourth, before increasing a little (with increased volatility) in the last decades before World War One. The problem with that indicator is its very aggregate level. Given the very concentrated distribution of bankruptcy assets and liabilities, it may result mostly from the changes in the top 1% of bankruptcies without any change in the behaviour of the remaining 99%. The statistics don't allow us to go in more detail except, for a few years, showing that the assets/liabilities ratio was very different among

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regions[7]. Our sample helps us a little. It suggests that bankrupt firms were increasingly leveraged, and that there was a relationship between leverage and the outcome of the bankruptcy (less *concordats* for highly-leveraged firms). Furthermore, bringing again the previous argument, *sociétés* were increasingly more leveraged than single-owner firms.

An important change in the structure of debt went in a direction opposite to the role of increased leverage: privileged debts, especially those with mortgages, decreased from around 20% of all debts in the bankruptcies of the 1840s to around 10% of those in the 1900s. This should have led to fewer conflicts among creditors and then, as we discussed in section 2, to **less** bankruptcies, not more. Nevertheless, this change may have been compensated by another structural change which was not mentioned in the statistics but resulted logically from the changes in the financial system during our period, and appears in our sample: the rise in the place of banks among the creditors. As creditors specialized in providing credit, banks were in a situation quite different from other commercial creditors, who had no expertise in the bankruptcy procedures. They could organize special departments which could sue debtors in a much more systematic manner when they could not obtain payment through other means. They did not suffer bad reputation for having sued their clients. They also had maybe provided larger amounts of credits than single trade partners of the debtor, so that it was worth entailing the fixed costs of a bankruptcy procedure even for relatively small percentage dividends.

Conclusion

We showed in this paper that one cannot explain the rapid rise in bankruptcies in France during the 19th century only through the liberalization of bankruptcy law, even complemented by the reduction in the procedure's costs. Using both a microeconomic model of the choice between private settlement and legal procedure, and the database we are building on bankruptcies from 1820 to 1913, we showed that the number of bankruptcy cases probably reflected, to a degree that remains difficult to measure, the rise in real reasons for bankruptcies, among them most likely an increase in the debt leverage of debtors. Nevertheless, the data also strongly suggests that the changes in bankruptcy law and in courts practices also had a role in the higher number of cases. Further work should allow to precise the respective roles of legal evolution and real economic changes. It will start from the model we described, which should provide the basis for an analysis of the structure of bankruptcies using both the regional variations available in the official statistics and the individual data of our sample. The importance of regional variations should allow not only to test the model

[7] In 1850, for example, its average value was 0.35, with a standard deviation of 0.17, a maximum value of 0.19 in Paris and a maximum of 1 in Bourges.

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on a panel dimension, but also to discuss the heterogeneity and possible convergence of courts practices in France.

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