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# Dealing with failure

Bankruptcy and insolvency in the English experience (1890-1939)

Gérer l'échec. Faillites et insolvabilité en Angleterre (1890-1939)

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# Dealing with failure. Bankruptcy and insolvency in the English experience (1890-1939)

**Abstract.** This paper analyses the functioning of bankruptcy and insolvency procedures in England and Wales between 1890 and 1930. This study is based on new or improved statistics, and looks at the balance between the use of official judicial solutions and the recourse to friendly agreements between debtors and creditors. This paper shows that in the period under investigation England and Wales experienced a decline in the use of official procedures, paralleled by a decreasing level of their efficiency, and in particular in the level of dividends paid.

Although this decline in the use of formal bankruptcy devices might in part also be linked to factors different from the efficiency of the institutions themselves, these results still cast doubts on the established view of the alleged superiority of Anglo-Saxon legal regimes in fostering economic performance.

#### Résumé. Gérer l'échec. Faillites et insolvabilité en Angleterre (1890-1939).

Cet article se penche sur le fonctionnement, dans les années 1890-1930, des deux procédures de faillite propres à l'Angleterre et au Pays de Galles. À partir de données statistiques nouvelles ou améliorées, il s'intéresse à l'arbitrage entre l'utilisation des solutions judiciaires officielles de règlement des faillites et le recours à des arrangements à l'amiable entre créanciers et débiteurs. Il montre ainsi que, pendant la période étudiée, les procédures officielles furent de moins en moins souvent choisies. D'autre part, elles étaient, semble-t-il, de moins en moins efficaces, en particulier, du point de vue des créanciers, en termes de niveau de dividendes obtenus. Le moindre recours aux procédures judiciaires peut certes avoir d'autres raisons que cette moindre efficacité; mais ces résultats laissent au moins planer un doute sur les idées reçues qui considèrent que le régime légal anglo-saxon est forcément supérieur au régime continental en termes d'incitation à la performance économique.

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A growing body of economic literature, known as the "law and growth" approach, argues that Anglo-Saxon legal regimes are better equipped than others to support economic performance<sup>1</sup>. The "law and growth" approach adopts a long-term perspective, suggesting that the reasons behind the relative efficiency of a country's legal system are either factors such as colonization or invasions (determining the fact that its legal institutions belong to one or another of the various "legal families") or mechanisms of institutional change which develop in the long term<sup>2</sup>.

This "flirt" of economic analysis with the historical perspective has stimulated economic historians to turn their attention to the long-term relation between legal institutions and economic performance. This line of research has proved extremely fruitful, as historical analysis is now challenging the established wisdom provided by the "law and growth" approach, both on the actual differences between legal families and on their relative ability to foster economic performance<sup>3</sup>. In this field, the study of bankruptcy and insolvency laws and procedures is growing in popularity<sup>4</sup>.

In this context, our paper deals with the general functioning of these instruments in England between the 1890s and the 1930s. More specifically, it aims at assessing the level of efficiency of official devices, both in absolute and comparative terms: a perspective that, despite the abundance of the historiography, is still missing<sup>5</sup>.

This paper is based on new or improved statistics and is structured as follows. Section 1 provides an overview of the available quantitative sources. The following three sections analyse the efficiency of English bankruptcy and insolvency laws and procedures using different perspectives: section 2 focuses on their usage, length, and level of dividends paid; section 3 looks at the structure of the productive system, and section 4 uses a comparative perspective. Some concluding remarks follow.

<sup>1.</sup> LA PORTA, R. & al., 1998; LEVINE, R., 1998.

<sup>2.</sup> The traditional "law and growth" approach stresses the former mechanism, while the latter has been developed, in particular, by R. RAJAN & L. ZINGALES, 2003.

<sup>3.</sup> See especially M. Bordo & P. Rousseau, 2006, A. Musacchio, 2008, and J. Sgard, 2006.

<sup>4.</sup> DI MARTINO, P., 2005a; HAUTCŒUR, P.-C. & LEVRATTO, N., 2007.

<sup>5.</sup> Works by historians such as I. Duffy, 1985, J. Hoppit, 1987, and V. M. Lester 1995, mainly discusses the political economy of bankruptcy and insolvency laws, while a previous work by the author (Di Martino, P., 2005a) focuses on length of procedures and amount of dividends, but did not provide a more general picture.

### 1. English data: An overview of the sources

The first problem that one encounters in dealing with English statistics is the conceptual (and linguistic) difference between bankruptcy and insolvency. While in everyday language these two words are used as synonyms and, if anything, only suggest a slight difference in the seriousness of the problem (being insolvent indicates a state somehow less hopeless than being bankrupt), in the technical jargon, these two words are used with very specific meanings: bankruptcy refers to personal failure, while insolvency applies to companies. This difference remained purely theoretical until an act (53, 54 Victoria, c. 71) was passed in 1890 to deal specifically with corporate insolvency. After that, sole ownerships and unlimited partnerships remained subject to the bankruptcy regime, while joint-stock companies and limited partnerships fell under the insolvency law umbrella.

Statistics about personal bankruptcy have been collected in England at least since the early 19th century, but only in a sporadic and unsystematic way. However, in the 1880s, profound changes in the law forced the government to take a much more active role in data collection and analysis. As a result of the 1883 Bankruptcy Act (46, 47 Victoria, c. 52), a new actor known as the official receiver became the fundamental figure in the management of bankruptcy procedures. Official receivers, instead of creditors' trustees, were in charge of all preliminary phases of procedures up to the final stage of assets liquidation. This step could be left to creditors' representatives, but only if courts had not decided otherwise. Because official receivers were full-time employees of the Board of Trade, this implied a massive shift from creditors to the government in the responsibility for the financial maintenance of bankruptcy apparatus.

As the 1883 act also increased the complexity and costs of dealings, and as the number of cases was on the rise, the 1880s transformation implied high expenditures for the public finances, so that the necessity arose of monitoring the efficiency and cost-effectiveness of the procedures. The very same 1883 law thus obliged the Board of Trade to collect a wide set of statistics to be published in an annual bulletin taking the name of Report by the Board of Trade under Section 131 of Bankruptcy Act (here referred to as "Bankruptcy Annual Report"). The bulletin was published yearly between 1884 and 1938, while one single, extremely summarised issue covered the whole period 1939-1953. The Bankruptcy Annual Report provides a variety of information, including the number of bankruptcies – and of other

procedures such as deeds of arrangements<sup>6</sup> – value of assets and liabilities involved (both at national level and disaggregated by court) and the debtors' gender and field of activity. It also provides information about the length and costs of procedures and the amount of "dividends" (i.e. the percentage of liabilities paid to creditors).

In 1890, the Parliament passed the Company (winding-up) Act and the Board of Trade started to collect statistics on corporate insolvency too. They took the form of the annual Report by the Board of Trade under Companies (winding-up) Act (here "Insolvency Annual Report"), which started in 1892. Up to 1938, the bulletin was published yearly, but one single issue covered the 1939-1945 period. Data provided by the Insolvency Annual Report are less informative and detailed than what one can find in the Bankruptcy Annual Report, especially regarding the value of capital (assets and liabilities) involved in procedures. The problem arises from the fact that the English law allowed three types of company liquidation (winding-up): compulsory, voluntary, and voluntary under court supervision. The numbers of cases for each different sort of winding-up procedure were collected, but the recording of assets and liabilities was only mandatory for compulsory liquidations. As compulsory liquidations were only a small minority (on average about 10% of the total number of cases), this means that complete information about capital involved in all sorts of procedures is not directly available.

Statistics provided by the Bankruptcy and Insolvency Annual Reports have already been used by researchers<sup>7</sup>. Lester's book is undoubtedly the most important reference on insolvency and bankruptcy during the Victorian period. Although the author's main interest is in the reconstruction of the political and parliamentary process leading to the approval and dismissal of various laws, he also offers an accurate analysis of statistical material. In particular, he provides data on bankruptcy and insolvency at national level (number, assets and liabilities), including an estimate of capital involved in voluntary liquidations, something which was not available from the official Reports. Lester also analyses data on failures in various cities and trades, and their relation to the business cycles. The only limit of Lester's extremely valuable contribution is that it is confined to the pre-World War I period.

<sup>6.</sup> The so-called deeds of arrangement consisted of different forms of friendly agreement between debtors and creditors requiring the supervision and approval of a court.

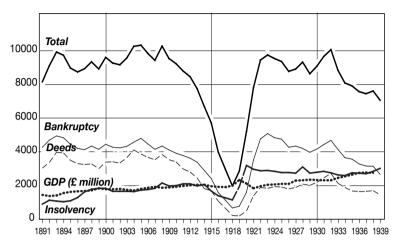
Lester, V. M., 1995; Di Martino, P., 2005a.

# 2. General patterns and efficiency

In order to assess the efficiency of the English bankruptcy and insolvency laws and practices, the very first step is to consider statistics on the evolution of their usage over time. In approaching the topic this way, we follow the methodology developed by Hautcœur and Levratto to study the functioning of bankruptcy institutions in France during the 19th century8. According to this approach, in circumstances of de facto insolvency (i.e. the inability to repay all debts), the actors involved (creditors, debtors, or courts) face a strategic choice between making recourse to official devices or simply seeking friendly agreements. This choice depends on the relative convenience of the two options and it is influenced by a number of elements, including the efficiency of the formal procedures themselves. Creditors and debtors have incentives to use those laws and procedures that are able to allow "good" entrepreneurs (or sound companies) to restart, avoid the shame inherent to the "bankrupt" condition, and/or guarantee fast and cheap recovery of debts. In other cases, extra-judicial solutions, such as friendly agreements with creditors, are favoured. Using this approach, we study the number of insolvency and bankruptcy procedures as an indirect measure of their efficiency, keeping in mind that we are always comparing them to the (unobservable) level of extra-judicial remedies.

Graph 1 plots the number of official procedures in England and Wales alongside a measure of the size of the economy (GDP at constant prices). Data are diseggregated between insolvency, ordinary bankruptcy, and deeds of arrangement, a solution available to personal debtors, consisting of court-supervised friendly agreements between creditors and debtors. The graph shows that between 1891 and 1939, while the economy experienced growth at a macro level, the total number of procedures not only did not increase at the same pace, but actually declined. This trend, however, is not common to all series: bankruptcy – strictly speaking – and deeds of arrangements declined, but the number of insolvencies increased. This simple piece of evidence already suggests that the structure of production, and especially the rise of limited-liability companies vis-à-vis other forms of governance, might be the main explanation of this pattern.

<sup>8.</sup> Hautceur, P.-C. & Levratto, N., 2007.



Graph 1. Number of official procedures in England and Wales (1891-1939)

Source: Bankruptcy, insolvency, and deeds of arrangement: see Appendix; GDP: MITCHELL, B., 1988.

Before exploring this direction, however, it is useful to go back to the original argument: might formal procedures have became progressively less appealing – which, conversely, would have led to a growing appeal to extrajudicial agreements?

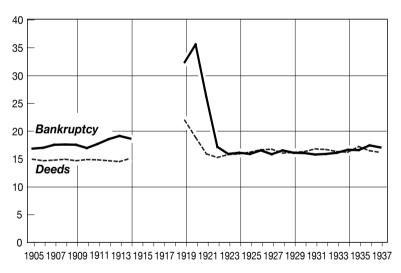
If this were the case, such evidence would contradict the historical accounts of the evolution of formal practices in England and Wales during the period under examination. According to the historiography, between 1891 and 1939, no major change in the legislation occurred, but during the 19th century, the use of official procedures had already become easier and more convenient. In the English system, the difference between extra-judicial agreements and formal procedures was gradually fading. Deeds of arrangement, introduced in the 1830s, were directly managed by debtors and creditors, limiting the court's involvement to ex post approval. On the other hand during the course of the 18th century, ordinary bankruptcy procedures had already largely lost their unpleasantness because of the introduction of debt discharge. In different paper, we already showed that in the period analysed here, both formal criteria and the actual implementation of debt discharge ensured that sound debtors filing for bankruptcy could be confident

<sup>9.</sup> DI MARTINO, P., 2005b.

that their discharge from past debts, and consequently their rehabilitation, only depended on their behaviour and technical competences, leaving almost no impact to arbitrary elements such as class or gender.

Despite the apparent efficiency of these various instruments, however, there is no doubt that the number of both deeds and insolvencies declined: the hypothesis that something in their actual implementation made them progressively less appealing therefore deserves investigation. Increasing length of procedures and/or rising costs are the first suspects.

Graph 2 shows the evolution of the average length of procedures, desegregated between bankruptcy and deeds of arrangement, between 1905 and 1937. The graph clearly shows an overshooting in the early 1920s, but no long-term increase in the average length able to discourage creditors and debtors. If anything, in terms of duration, more complex procedures such as bankruptcies converged towards the length of "simpler" devices such as deeds of arrangements.



Graph 2. Average lenght of procedures (in months)

Source: Elaboration from P. DI MARTINO, 2005a.

Duration, however, is only one part of the problem. The convenience in use of formal procedures also depends on how much payment they are able to guarantee. One way of assessing this problem is to calculate the so-called

"loss to creditors". This technique and this concept were developed in the early 20th century by the Board of Trade, in order to analyse the aggregate cost for the whole economy that resulted from company insolvency and personal bankruptcy. This aggregate measure is constructed by subtracting "net" assets from the level of liabilities and dividing the result by GDP at current prices. "Net" assets are estimated as one third of "gross" assets, in order to account for the cost of procedures. Lester has constructed an index of the loss to creditors for the period up to 1913, taking into account both personal bankruptcy and insolvency<sup>10</sup>. Using data from Bankruptcy Annual Reports, we provide an estimate of the "loss to creditors" ratio for the whole period 1890-1939; this series is plotted in Graph 3. Our data are slightly different from Lester's figures: the series from 1890 to 1913 has been recalculated using a different estimate of GDP<sup>11</sup> as deflator, although differences turned up to be minimal (see Appendix 2). More importantly, our data only include bankruptcies (and deeds of arrangement), as figures for corporate insolvency are not directly available and an indirect estimation has been made complicated (if not impossible) by the absence of criteria such as the ones used by Lester to produce his pre-1914 series<sup>12</sup>.

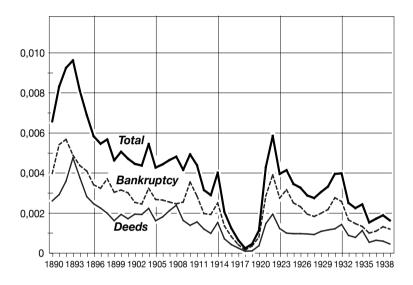
Graph 3 shows that loss to creditors generated by personal bankruptcy between the 1880s and the Second World War tended to decline over time. At first glance, this can be interpreted as the sign that, in the long run, the increasing accessibility of English bankruptcy institutions had attracted a growing mass of "ordinary" failures, and not only the desperate cases, thus augmenting the average quality of applicants. Two considerations, however, make this interpretation problematic. Firstly, the improvement in the trend is not homogenous. During the First World War, for instance, the decline of the loss to creditor is remarkable, but the early 1920s and the 1930s crises are paralleled by a clear increase in the ratio. This shows that even if we accept the hypothesis of a long-term improvement due to institutional reasons, the system was to some extent still prone to the influence of short-time crises on the average quality of debtors. Secondly, as shown in another section of this paper, bigger firms have gradually tended to choose the incorporated form and thus moved under the insolvency umbrella. This means that the loss to creditor generated by bankruptcy data more and more reflected the

<sup>10.</sup> This is a valuable contribution in itself because, as mentioned in section 1, some of these data were not available in the various bulletins.

<sup>11.</sup> V. M. Lester, 1995 uses data from C. Feinstein, 1976, while we use figures from B. MITCHELL, 1988.

<sup>12.</sup> Lester's reconstruction is based on two estimates provided by the Board of Trade. Lester, V. M., 1995, chapter 6.

condition of smaller companies: the ones that possibly had a better assets/liability ratio. In other words, the apparent improvement in the series might be due to a bias in the data sample.

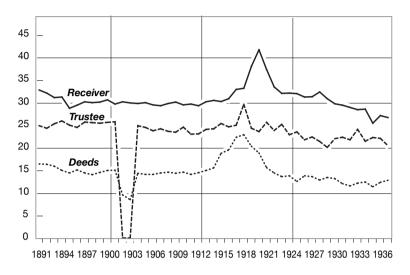


Graph 3. Loss to creditor (% of GDP)

Source: See Appendix.

In addition, any conclusion based on the "loss to creditor" suffers from two severe limitations in the methodology itself. Firstly, the "loss to creditors" measures the impact of insolvency at aggregate level by reference to GDP, but it does not say much about the direct consequences to creditors, for example in terms of percentage of liabilities actually paid at the end of the procedure. The general process of growth of the economy in fact could hide a worsening ratio between the amount of assets and liabilities involved in procedures. Secondly, the loss to creditors is based on no real calculation of costs: they are simply considered as a fixed percentage of assets.

In order to control for the first problem and provide a better assessment of the actual impact of bankruptcy on creditors, it is useful to look at the average dividend (as a percentage of liabilities) paid at the end of procedures. Graph 4 plots it, distinguishing between bankruptcies managed by the official receiver, bankruptcies administered by the creditors' trustee, and deeds of arrangement.



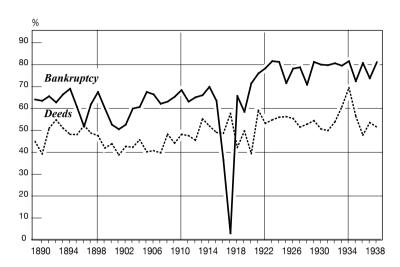
Graph 4. Average level of dividends (% of liabilities)

Source: Elaboration from P. DI MARTINO, 2005a.

Graph 4 shows that between 1891 and 1934, the average dividend served to non-secured creditors declined, contradicting the evidence provided by the "loss to creditors" index. Interestingly, no difference in the general pattern can be found between bankruptcies of any kind and deeds of arrangement, although the latter were supposed to be used by the best cohort of debtors, those who were able to pay relatively higher share of their debts.

It is evident that over time, the efficiency of English official procedures in ensuring the payment of a satisfactory dividend declined: this supports the idea that the appeal of extra-judicial agreements might have increased. The problem of diminishing dividends can have had two causes, both of them hard to detect using the "loss to creditors" ratio: an increase in the costs and/ or an actual deterioration of the assets/liability ratio, for example because of a decreasing "quality" of debtors filing for official procedures<sup>13</sup>.

<sup>13.</sup> This analysis is based on the assumption that the share of secured credits does not change. An increase in this share would make the problem of the worsening of the assets/liabilities ratio even more serious for unsecured creditors, as a bigger part of a declining amount of resources would be devolved to the payment of higher-ranked debts. Conversely, less secured credits would make the relative position of unsecured creditors easier and soften



Graph 5. Percentage of liabilities not covered by assets

Source: Elaboration from P. DI MARTINO, 2005a.

Graph 5 plots the difference between liabilities and assets as a percentage of the liabilities themselves. It shows that, as far as bankruptcy procedures are concerned, the percentage of liabilities not covered by assets increased over time, indicating a decline in the aggregate quality of debtors. This, however, was not the case for deeds of arrangement.

The quality of debtors thus explains why bankruptcy procedures provided diminishing dividends, but not why the same happened in the case of deeds of arrangement. An increase in costs might be the solution to this puzzle. Table 1 shows that costs varied much among different kinds of procedures: deeds of arrangement had the lowest, and bankruptcy managed by trustees was cheaper than the same procedures in the hands of official receivers. Over time, the cost of bankruptcies run by trustees slightly decreased, while an increase can be noticed in the other two cases.

the impact of declining assets/liabilities ratio. Unfortunately, to our knowledge, data on secured credits are not available.

Table 1. Costs of procedures (percentage of gross assets)

Period (Average)	Official re- ceivership	Trustee	Period (Average)	Deeds
1884-1888	35.52			
1889-1893	33.55	26.51	1891-1895	18.12
1894-1898	33.15	26.09	1896-1900	19.12
1899-1903	31.54	24.59	1901-1905	20.13
1904-1908	35.02	27.67	1906-1910	19.75
1909-1913	34.38	25.42	1911-1915	20.96
1914-1918	29.62	26.05	1916-1920	21.10
1919-1923	29.82	26.48	1921-1925	18.76
1924-1928	39.00	29.84	1926-1930	20.67
1929-1934	39.69	25.30	1931-1934	21.24
Average	34.13	26.05		19.91

Source: DI MARTINO, P., 2005a.

In conclusion, it seems that the functioning of official mechanisms explains, at least to some extent, why they became less and less appealing. The length of procedures did not increase, but, contrary to what was suggested by the "loss to creditors" ratio, dividends declined. In the case of deeds of arrangements, growing costs was the problem, while bankruptcy procedures managed by creditors' representatives suffered from the worsening quality of debtors. Bankruptcy dealings run by receivers were exposed to both problems.

### 3. Efficiency and the structure of the productive system

The analysis conducted so far suggests that we have reasons to believe – or at least to suspect – that the official bankruptcy procedures progressively lost their appeal. However, this result is based on the assumption that the expansion of the English economy caused an increase in the number of firms, so that the decline in the use of official devices can be directly interpreted as a sign of the parallel increase in the recourse to friendly agreements. In fact, the positive link between macroeconomic growth and number of firms requires qualifications. Firstly, the period under examination is considered as a phase of industrial consolidation and concentration, suggesting that the number of firms did not necessarily increase while the economy was expanding<sup>14</sup>. Secondly, it might well be the case that, even if the total number of businesses augmented, some types of companies declined in number while others increased.

In order to appreciate the relevance of these problems, we have to go back to the data plotted in Graph 1, which shows that the total decline in the use of procedures is the net result of two opposite trends: an increase in the number of insolvency dealings and a parallel decline in the number of bankruptcy cases. To consider this pattern as the sign of a declining efficiency of official devices, we have to assume that the size of the sample of businesses subject to bankruptcy increased or remained constant over time, while the number of cases that fell under the insolvency law increased more than proportionally with the rise of procedures.

Unfortunately, we lack data about the number of sole-ownerships operating in England and Wales during this period, and any guess-estimate implies a high degree of speculation. The same must be said about partnerships, even if, in this case, a more solid ground can be found by considering the relation between unlimited partnerships and limited-liability companies. Although no statistics are available, the historiography supports the hypothesis that partnerships above a given size might have gradually turned into limited-liability companies, and that new firms were incresingly created as limited-liability companies instead of partnerships<sup>15</sup>. This would increase the sample of firms subject to insolvency and decrease the number of businesses exposed to the bankruptcy regime. This could provide an explanation of the decreasing number of bankruptcy procedures, that would be alternative or complementary to the one based on their increasing cost and declining dividends.

<sup>14.</sup> See F. Carnevali, 2005, and L. Hannah, 1983.

<sup>15.</sup> Lester, V. M., 1995.

However, the total number of procedures (bankruptcy and insolvency) still declined over time. If we assume that no major change in the population of sole-ownerships took place and that a shift only occurred from partnerships (subject to bankruptcy) to companies (subject to insolvency), the question remains open: why did the increase in the number of windingups not compensate for the decline in the number of bankruptcy dealings? A simple answer could be that, even if partnerships progressively turned into joint-stock companies, the total number of firms subject to insolvency did not increase in proportion, for example because of concentration and increasing size of firm. As a consequence, we would not expect the number of insolvencies to grow in the same proportion as the decline in the number of bankruptcies.

In order to test this hypothesis, an estimate of the number of companies existing in England between 1891 and 1937 is provided<sup>16</sup> and data on numbers of insolvencies are plotted against this variable. It shows that the ratio between the number of insolvencies and the number of companies declined from 1891 to 1937 (Graph 6)<sup>17</sup>.



Graph 6. Ratio number of insolvency/number of companies 1891-1937 (%)

Sources: Number of insolvencies: see Appendix; number of companies:
Insolvency Annual Report, various issues.

<sup>16.</sup> For details, see Appendix.

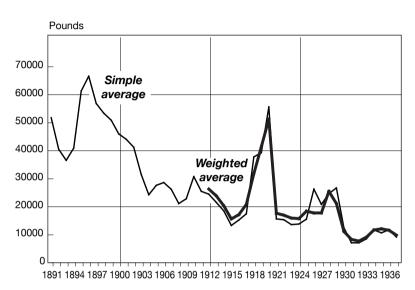
<sup>17.</sup> It is unclear whether or not these figures include the number of limited partnerships registered in England. However, this number was negligible.

Having dropped the possibility that the evolution of the number of insolvency procedures might be explained by the number of companies subject to it, we now have to decide whether this result must be connected to a declining appeal of these procedures and an increasing recourse to extra-judicial agreements. This would be an extremely surprising result, as the very nature of the English corporate insolvency was already very much oriented towards friendly agreements in the form of voluntary liquidations, even if this solution, which implied a very limited role for official bodies, was usually confined to still solvent companies. Unfortunately, data about the functioning of insolvency procedures, such as length and dividends, are not available and any assessment of their efficiency remains a matter of speculation.

As an alternative, we could discuss whether the declining recourse to insolvency in fact was just the result of an increasing stability of companies, because of better governance, improved risk-assessment, increasing size, and so on. This approach would require the collection of an enormous amount of data and, even if this were possible, the limited scope of this paper would make a comprehensive study of such a complex topic unfeasible. However, something can be said at least about the companies' size, thanks to data on the average amount of nominal capital provided by Insolvency Annual Reports<sup>18</sup>. Graph 7 shows that, parallel to the phenomenon of industrial concentration, the average capitalization (in nominal terms) of newlycreated English companies declined over time<sup>19</sup>. These two phenomena are not in conflict, as whilst few big companies became bigger, a vast number of relatively little concerns entered the market.

<sup>18.</sup> Only companies with nominal capital have been included. It must be noticed that a negligible amount of company without capital existed in England during this period.

<sup>19.</sup> Because of the positive average rate of inflation during the period under investigation, the decrease in real terms is even more remarkable.



Graph 7. Average nominal capital of English companies 1891-1937 (Pounds)

Source: Insolvency Annual Report, various issues.

Although this is far from being a conclusive piece of evidence, the hypothesis of an English system progressively becoming more stable, and therefore the expectation that the number of failures in proportion to the number of companies would decline, is not supported, as smaller firms tend to be more prone to failure than the bigger ones.

# 4. Comparative approach and relative efficiency

Sections 2 and 3 discussed the efficiency of the English law and practices in a national perspective. The risk implicit in this kind of approach is that, because no system is perfect, weaknesses might be overemphasized. The use of a comparative methodology allows us to put the strengths and weaknesses of the English system in perspective and provides a more nuanced assessment of its efficiency.

In this regard, Italy offers a good measure of comparison, as the two countries had different approaches to the problem of insolvency. It is interesting to notice that these differences do not seem to have been the unavoidable consequences of belonging to a different legal family, as predicted by the "law and growth" approach, rather the product of idiosyncratic patterns of development of bankruptcy and insolvency laws in the two legal systems<sup>20</sup>. Although during the 20<sup>th</sup> century, as correctly pointed out by Sgard<sup>21</sup>, the attention shifted everywhere from the issue of punishing "immoral" debtors to the problem of finding a set of devices minimising the collective costs of insolvency and bankruptcy, the results of this process varied significantly from country to country. In England, the search for solutions inducing debtors' cooperation, rather then using pure coercion, was pursued with more efficiency than everywhere else in Europe. This led to the provision of specific "soft" devices (for example, debts discharge was available in England, but not in Italy), as well as easier formal conditions to file for alternatives to bankruptcy (like deeds of arrangement in England and concordati preventivi in Italy)<sup>22</sup>. Qualitative evidence suggests that in the Italian case, formal conditions made a big difference on the actual possibility for debtors to use alternative procedures<sup>23</sup>.

According to this picture, we would expect the English data to show less fluctuations than Italian figures: English bankruptcy and insolvency laws are supposed to have become devices used under normal circumstances as well as during crises. In Italy, on the contrary, these procedures were painful for debtors: we expect rational economic agents to have tried to avoid them by any means. Insolvency, in a sense, was only for the desperate. During crises, however, their number would have increased and, at the same time, escaping bankruptcy (for example by further recourse to credit)

<sup>20.</sup> DI MARTINO, P., 2006.

<sup>21.</sup> SGARD, J., 2006.

<sup>22.</sup> DI MARTINO, P., 2005a.

<sup>23.</sup> DI MARTINO, P. & VASTA, M., 2007.

would have become more difficult. For these reasons, we expect the correlation between macroeconomic fluctuations and the number of insolvencies and bankruptcies to be stronger in Italy than in England. Graph 8 plots the number of bankruptcy and insolvency cases in Italy and England (and Wales) between circa 1890 and 1939.

England Italv n 

Graph 8. Total number of bankruptcies and insolvencies in England (and Wales) and Italy, c. 1891-c.1939

Source: See Appendix.

The two series show common aspects and remarkable differences. During World War I, insolvency massively declined in both countries. Two possible explanations for this pattern can be provided. Firsty, the war imposed peculiar conditions to the economy, inflated by an artificially increased demand; in a sense, anyone who was able to sell something useful for the conflict could find a market. Secondly, during wars, the functioning of legal institutions might be so affected as to made them unable to process all cases. This would explain the sudden rise in the number of cases in the immediate after-war years.

Long-term stability is the second pattern shared by the two series. Despite a clear growing trend in the number of cases noticeable in Italy up to the early 1930s, at the end of the period, the total number was close to what it was at the beginning of the period. The situation is similar in the English case, while, as noticed in section 2, the number slightly declined over time.

When we look at short-term fluctuations, however, significant differences surface, especially during years traditionally associated with shortterm crises. In Italy, the 1911 crisis, the reintroduction of the gold standard in 1926, and the Great Depression are all paralleled by sudden increases in the number of insolvencies and bankruptcies. England provides a different picture: neither the Baring crisis in 1890, nor the return to the gold standard in the 1920s is associated to remarkable peaks in the number of business failures. The early 1920s contraction sees an increase in the number of cases, but this seems to be related to a general growing trend that followed the war, rather than to a specific crisis (in fact, the number is in line with the average pre- and post-war levels). Only the dramatic years of the great Depression represent an exception. Also from this point of view, however, the picture of England as compared to Italy is one of stability. Table 2 shows the difference between the average number of cases during the depression years and the total average in the two cases. In England, the average number of insolvencies between 1930-1932 is only 13% higher than the total sample average, a figure that goes down to 9% when 1933 (although hardly a year of crisis in England) is included. By contrast, in Italy, the 1930-1933 average is 184% higher than the sample average.

Table 2. Average of total sample versus depression years

	Italy	England
Total average vs. average 1930-1933	183.72%	9.4%
Total average vs. average 1930-1932		13.2%

Source: See Appendix.

The analysis of the standard deviation of the two series provides a further way of measuring the relation between macroeconomic fluctuations and the number of insolvencies. Using this procedure, we focus on "ordinary" fluctuations linked to the business cycle, rather than on the sensitivity to short-term exceptional shocks. In order to make the comparison meaningful, data are turned into coefficients of variations shown in Table 3<sup>24</sup>. This confirms the above picture: as compared to Italian figures, English data

<sup>24.</sup> The coefficient of variation is constructed by dividing the standard variation by the means. This procedure makes series comparable when data are of different orders of magnitude.

have a much lower measure of dispersion, especially when the exceptional war years are not included in the sample.

Table 3.	Coefficient	of 1	variation	of	insoi	lvencies	series	

	Italy	England
WWI years included	0.82	0.24
WWI years not included	0.78	0.15

Source: See Appendix.

These results are exposed to two possible criticisms. The first one refers to the fact that because of the inaccessibility of official procedures in Italy, the recourse to unofficial agreements might have been higher than in England. Because different types of firms might have found it easier to reach extra-judicial agreements, the two series would include different kinds of firms. In particular, it might be argued that the recourse to informal deals is easier for smaller companies, because of lower coordination problems. Therefore, the English data might include a lower number of corporate insolvencies, which could influence the relative stability of the two series. Unfortunately, the Italian data do not allow us to differentiate between insolvency and bankruptcy, but qualitative evidence suggest that official procedures (including *concordati preventivi*) were as hard to obtain for joint-stock companies as for partnerships or sole-ownerships<sup>25</sup>.

On the other hand, the higher volatility in the number of bankruptcies in Italy, as compared to England, might be the mere result of a less stable macroeconomic environment. This hypothesis can be tested by looking at the variance of series of GDP at constant prices in the two countries (Table 4).

Table 4. Coefficient of variation of GDP (constant prices) series

	Italy	England
Including WWI	0.34	0.18
Excluding WWI	0.35	0.19

Source: Italy: Rossi, N., Sorgato, A. & Toniolo, G., 1993; England: MITCHELL, B., 1988.

<sup>25.</sup> DI MARTINO, P. & VASTA, M., 2007.

Table 4 shows that the coefficient of variation of GDP in Italy is roughly two times higher than the English one. However, the coefficient of variation of the bankruptcy and insolvency series is about four times higher in Italy than in England. If we assume a stable proportional relation between variation in the number of insolvency/bankruptcy cases, variation of GDP, these results suggest that the higher turbulence of the macroeconomic environment only partially explains the difference in the number of failures in the two countries.

Descriptive statistics thus seem to confirm the expected view about the relative degrees of stability of the two legal regimes. The picture obtained from the analysis of standard deviations goes in the same direction, although the last test relies on the rigid assumption of a stable, strictly proportional correlation between growth and variation in the number of cases of insolvency. On the whole, these results support the view that England had found better solutions than Italy to the problem of providing trust-worthy and efficient insolvency and bankruptcy laws and procedures.

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Scholars using the findings of the so-called "law and growth" paradigm as the conceptual framework for historical research had to give credit, once again, to the wise words of the old master Alexander Gerschenkron, who claimed that Clio is a messy housewife<sup>26</sup>. This paper is no exception and shows that even in England, the motherland of common law, the functioning of legal institutions might not have been quite as smooth as commonly believed.

Despite sustained economic growth between the 1890s and the 1930s, the use of official bankruptcy procedures in England declined over time. Assuming a stable level of aggregate risk in the economy, and a positive correlation between macro growth and the number of businesses operating in the country, this picture casts doubts on the actual efficiency of these procedures, suggesting that recourse to unofficial, extra-judicial agreements might have risen over the period. The decline of dividends extracted via official devices, either because of growing costs and/or a diminishing quality of debtors, supports this view. A conclusive assessment of this hypothesis, however, is made impossible by the fact that the actual number of firms subject to bankruptcy procedures (sole ownerships and unlimited partnerships) is unknown.

<sup>26.</sup> Gerschenkron, A., 1962.

This problem does not exist in the case of insolvency, as an estimation of the stock of joint-stock companies registered in England can be provided. Data show that during the period under study, their number increased more than proportionally to the volume of official winding-up procedures. This might suggest that insolvency also declined in popularity, to the advantage of extra-judicial deals. Unfortunately, statistics on the efficiency of official insolvency procedures are not available, and an exhaustive analysis of all elements able to shift the companies' preference from the use of judicial solutions to friendly agreements requires a wider scope than the one of this paper. The study of one of these elements (the new firms' size) reveals that the average English start-up became smaller over the period studied. This evidence, however, is inconclusive, because smaller companies are, on the one hand, more prone to failure, but, on the other, in a better position to obtain friendly agreements.

Finally, comparative analysis shows that English procedures were less sensitive to macroeconomic fluctuations than Italian ones. This suggests that, despite possible limitations and problems, the English system still managed to attract a relatively stable cohort of average firms, while under the Italian legislation, only the very worse segment of debtors used official remedies.

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# **Appendix**

Appendix 1. Stock of English joint-stock companies: sources and methodology

H. A. Shannon provides the stock of existing companies in 1884 (944)<sup>27</sup>. In another paper<sup>28</sup>, he also provides the number of companies registered, sold, merged, and liquidated in London in 1866-1874 and 1875-1883. Using these data, we calculated the percentage of companies that disappeared in London during these two periods. Assuming that this percentage is a good approximation of the data at the national level, we calculated the number of companies lost in England by applying the relative to the first period percentage to the cumulative sum of companies registered in the country in 1845-1874<sup>29</sup>, and the relative to the second period percentage to the cumulative sum of companies registered in England in 1875-1883. We then simply calculated the stock of companies in 1874 and the number of companies added until 1883 as the difference between the cumulative sum of registered companies and the number of companies lost. The actual stock of companies in 1883 is the sum of these two numbers, plus the original estimate for 1884. The stock created between 1884 and 1890 has been constructed with a similar methodology, but we only used data for merged companies<sup>30</sup>, rather than the number of sold or merged companies provided by Shannon in his 1933 paper. This procedure underestimates the number of companies lost by about 10%, but has the advantage of relying on more solid statistics.

After 1890, we calculate the stock of companies for each year by adding the number of companies registered in that year to the previous year's stock and subtracting the wound-up and merged companies.

<sup>27.</sup> Shannon, H. A., 1954.

<sup>28.</sup> Shannon, H. A., 1933.

<sup>29.</sup> Data until 1862 have been taken from H. A. Shannon, 1933, and for the following phase from various issues of the *Insolvency Annual Report*.

<sup>30.</sup> Taken from L. Hannah, 1983.

Appendix 2. Numbers of failures in England and Wales

	Bankruptcy	Deeds	Insolvency	Total
1891	4242	3008	873	8123
1892	4657	3333	1091	9081
1893	4901	3938	1042	9881
1894	4794	3894	998	9686
1895	4415	3462	1060	8937
1896	4170	3271	1262	8703
1897	4098	3208	1587	8893
1898	4310	3246	1745	9301
1899	4111	2974	1793	8878
1900	4410	3354	1804	9568
1901	4244	3369	1618	9231
1902	4202	3305	1629	9136
1903	4286	3622	1632	9540
1904	4546	4085	1600	10231
1905	4764	3839	1693	10296
1906	4436	3641	1730	9807
1907	4111	3488	1797	9396
1908	4306	3822	2120	10248
1909	4070	3491	1944	9505
1910	3880	3364	1960	9204
1911	3742	2950	2061	8753
1912	3581	2770	2067	8418
1913	3358	2411	1946	7715
1914	2867	1776	2022	6665
1915	2379	1652	1648	5679
1916	1557	1050	1354	3961
1917	1089	612	1233	2934
1918	628	198	1113	1939
1919	745	165	1908	2818
1920	1565	451	3158	5174
1921	3472	1368	2928	7768
1922	4733	1847	2834	9414
1923	5048	1808	2859	9715

	Bankruptcy	Deeds	Insolvency	Total
1924	4794	1901	2810	9505
1925	4708	1877	2730	9315
1926	4239	1763	2737	8739
1927	4314	1856	2703	8873
1928	4167	2054	3064	9285
1929	3929	1971	2707	8607
1930	4133	2154	2760	9047
1931	4403	2415	2804	9622
1932	4645	2676	2712	10033
1933	4110	2102	2600	8812
1934	3623	1861	2568	8052
1935	3523	1635	2711	7869
1936	3249	1598	2693	7540
1937	3123	1630	2671	7424
1938	3105	1663	2810	7578
1939	2635	1414	2980	7029

Sources: 1891-1913: Lester, V. M., 1995; 1914-1939: Bankruptcy Annual Report and Insolvency Annual Report (various issues). Data on numbers of bankruptcies have already been published by B. MITCHELL, 1988, but our series, following Lester's indication, takes the receiving orders into account, rather than the adjudicated bankruptcies collected by Mitchell. This allows the inclusion of all cases ending up with any kind of composition, together with the actual bankruptcies. For more details, see V. M. Lester, 1995, p. 214-215.

Appendix 3. Loss to creditor (% of GDP)

		Le	ster		Our	calculation	ıs
	Bankruptcy	Deeds	Winding-up	Total	Bankruptcy	Deeds	Tota
1888	0.5	0.26					
1889	0.43	0.23					
1890	0.39	0.21			0.40	0.26	0.65
1891	0.53	0.22			0.54	0.29	0.83
1892	0.57	0.3	1.37	2.24	0.56	0.36	0.92
1893	0.48	0.4	1.26	2.14	0.49	0.47	0.90
1894	0.44	0.32	1.27	2.03	0.43	0.37	0.8
1895	0.4	0.23	0.97	1.6	0.41	0.28	0.69
1896	0.34	0.2	1.24	1.78	0.34	0.24	0.58
1897	0.31	0.18	1.38	1.87	0.32	0.22	0.5
1898	0.36	0.16	1.55	2.07	0.37	0.20	0.5
1899	0.3	0.13	1.62	2.05	0.30	0.16	0.4
1900	0.3	0.15	1.43	1.88	0.31	0.19	0.5
1901	0.3	0.14	1.24	1.68	0.30	0.17	0.4
1902	0.25	0.15	1.31	1.69	0.25	0.19	0.4
1903	0.24	0.15	1.28	1.67	0.24	0.19	0.4
1904	0.32	0.17	1.04	1.53	0.32	0.22	0.5
1905	0.26	0.13	1.02	1.37	0.27	0.16	0.4
1906	0.25	0.14	0.98	1.38	0.26	0.18	0.4
1907	0.25	0.16	0.9	1.31	0.25	0.21	0.4
1908	0.24	0.19	1.16	1.59	0.24	0.24	0.4
1909	0.25	0.13	1.24	1.62	0.25	0.16	0.4
1910	0.35	0.11	0.89	1.35	0.35	0.14	0.4
1911	0.28	0.12	0.8	1.2	0.28	0.15	0.4
1912	0.19	0.09	0.99	1.29	0.20	0.12	0.3
1913	0.19	0.07	0.75	1.01	0.19	0.10	0.2
1914					0.25	0.15	0.4
1915					0.13	0.07	0.2
1916					0.08	0.04	0.1
1917					0.04	0.02	0.0
918					0.01	0.01	0.0
1919					0.03	0.01	0.0

	Lester				Our	calculation	es.
	Bankruptcy	Deeds	Winding-up	Total	Bankruptcy	Deeds	Total
1920					0.08	0.03	0.11
1921					0.28	0.15	0.43
1922					0.39	0.19	0.58
1923					0.27	0.12	0.39
1924					0.31	0.10	0.41
1925					0.25	0.09	0.34
1926					0.23	0.10	0.32
1927					0.19	0.09	0.28
1928					0.18	0.09	0.27
1929					0.20	0.11	0.30
1930					0.22	0.11	0.33
1931					0.27	0.12	0.39
1932					0.25	0.14	0.40
1933					0.16	0.09	0.25
1934					0.15	0.08	0.22
1935					0.13	0.11	0.24
1936					0.10	0.05	0.15
1937					0.11	0.06	0.17
1938					0.13	0.06	0.19
1939					0.12	0.04	0.16

Sources: Lester data: Lester, V. M., 1995; Our data: our calculation based on various issues of *Bankruptcy Annual Report* (assets and liabilities) and B. MITCHELL, 1988 for GDP.