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Size, Structure, and Strategies: Insolvency and "The Nature of the Firm" in Italy, 1920S-1970S

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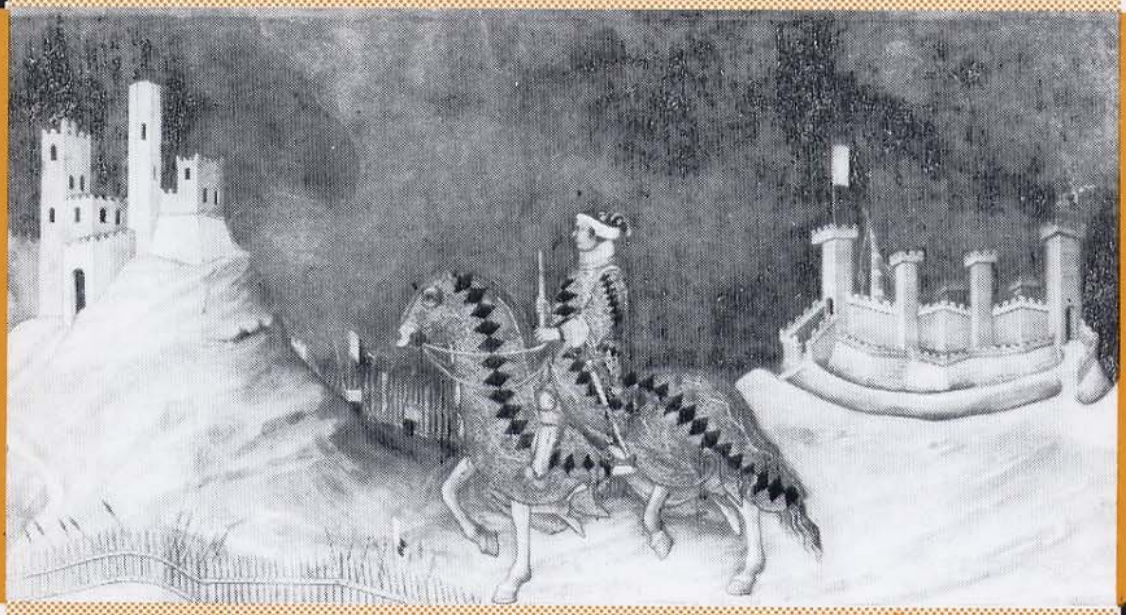

Abstract - During the Twentieth century, Italian joint-stock companies remained relatively small and tended to die young. This fact constrained the development of the full potential of the Italian industry, as small-dimensioned companies struggled to implement the most efficient technologies and managerial techniques.
This paper analyses this problem by looking at the functioning of insolvency procedures. Using quantitative and qualitative evidence, we show how various devices that progressively appeared on the scene failed in providing efficient solutions to re-start worthy companies.
Insolvency procedures thus remained liquidation-prone, a factor that contributes to explain the peculiarity and the limits of Italian industrial capitalism.

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SIZE, STRUCTURE, AND STRATEGIES: INSOLVENCY AND "THE NATURE OF THE FIRM" IN ITALY, 1920S-1970S[1]

In a seminal paper published eighty years ago, Coase explained that in its very nature 'the firm' is not a mere instrument of production, rather a device for economic coordination to reduce the complexity and costs of 'pure market' exchanges.[2] Subsequent theoretical and empirical contributions in new institutional economics (NIE) pointed out that, in a world dominated by limited rationality and opportunistic behaviour, the essence of the 'coesian' firm is the development of 'organisational capabilities' defined as a set of mechanisms of coordination among economic agents and of diffusion of explicit and tacit knowledge.[3]

Historical studies, in particular the analysis of nineteenth-twentieth century American industrial capitalism, have shown that the development of firms along the lines of the NIE model is a long and complex process of interaction between technologies and markets on the one hand, and firms' size, structure, and strategies on the other. Technological innovations open new markets requiring bigger scale of operation, driving a process that increases the firms' size and leads to the development of more complex structures, in which the progressive rise of the importance of management (including middle management) parallels the decline of owners' direct involvement. [4]

More generally, the message of historical studies such as these is that, in order for companies to become 'coesian' firms, they need stability and time to grow in size, a precondition for the development of a structure able to generate 'organisational capabilities'.

These elements stand at odds with the Italian experience, where joint-stock companies remained smaller and the rate of birth/mortality higher than in other Western countries.[5] On the other hand, in the case of the few big corporations they either retained their 'family' structure or they were (often inefficiently) run by the state, and never fully developed into Chandler-style 'visible hands' of economic coordination.[6] In short, 'firms' as defined by the NIE failed to appear and the emergence of 'organisational capabilities' remained, to use Amatori's words, a 'tormented' process.[7] This fact represented a severe constraint to the full development of the Italian industry and, as a consequence, of its entire economy. It is well documented that because of the nature of its joint-stock companies, Italy struggled to establish its permanent presence in high-technology industries, lagged behind the introduction of the most efficient managerial techniques, and was well behind other Western countries in terms of research and development.[8] Certainly the impressive success of export-oriented small and

medium family-owned firms managed to shadow these problems for most of the twentieth century, but as a consequence of industrial districts suffering from increasing competitions and the exhaustion of some of the elements of competitive advantages, these issues are surfacing again.

This peculiarity of the Italian model has been the subject of numerous investigations focusing on a variety of elements, including the size of the domestic market, the role of the state, and the controversial relationship with the financial sector.[9] More in general, it can be said that explanations tend to converge towards the criticism of what can be defined as the 'institutional' environment. Maybe surprisingly, in this debate not much attention has been paid to the functioning of legal institutions, in particular to commercial law, despite the evident impact that legislation and regulations might have on companies' size, structure, and strategies.[10] This gap is even more surprising when we consider that in the analysis of the American case legal institutions such as the Anti-trust law played a critical role in the development of big business,[11] not to mention the fact that in the last two decades the role of legal institutions in fostering economic performance has been one of the most investigated topics in economics.[12]

The aim of this paper is to analyse the 'nature of the firm' in Italy by looking at the impact of the legal system, more specifically insolvency laws and procedures.[13] Besides other roles, these institutions perform the fundamental function of selecting, among firms in critical conditions, those to be liquidated from the ones that will be given a further chance. Also, it is the law's task to provide the practical instruments for business' re-launch. As insolvency is an ever-present phenomenon, very often caused by structural inefficiency and/or of fraudulent behaviour, but it is also the result of remediable problems, insolvency laws and practices play a key part in shaping the profile of the economy. More specifically a continuation-prone legal system, able to smooth the effect of the economy's natural instability, should protect the process of firms' growth and evolution along the lines of the NIE model.

In this paper we test the hypothesis that Italian legal institutions were particularly badly equipped to deal with the problem of companies' selection and re-start, de facto supporting business' liquidation rather than continuation. Without aiming at downplaying other explanations provided by historiography, we argue that the functioning of insolvency laws and procedures contributes to explain the peculiar nature of Italian industrial capitalism.

This study is based on both quantitative and qualitative sources. The former consist of macro national data on the number of cases involved in various procedures between 1900 and 1980. Information about insolvent joint-stock companies in services and manufacturing[14] in

Milan and its province during the interwar period and the 1950s constitutes the bulk of qualitative sources. The choice to focus on Milan is motivated by the unique availability of detailed information about industrial insolvency during the 1920s and 1930s. During that period local normative obliged the Milan Chamber of Commerce to keep all documentation regarding failed companies, including detailed reports provided by curatori fallimentari.[15] Although not all reports survived, this collection represents the richest source on the topic available in Italy. This is a particularly fortunate case, as Milan and the province were most important industrial area of the country, therefore well representative of the problem at a national level.

The paper is structured as follows: section I analyses the evolution of the various legal instruments available in Italy in different periods. Section II provides a quantitative overview of bankruptcy and insolvency. Sections III to V run a qualitative analysis based on the results of section II. More specifically, section III looks at the limits of the tools available during the interwar period, section IV to the alternatives found to circumvent the inefficiency of official devices, while section V analyses whether or not new legal procedures developed in 1942 changed the way in which Italian company dealt with the problem of insolvency. Section VI provides some concluding remarks.

I

In market economies insolvency and bankruptcy laws are pivotal institutions as they provide incentives (or constraints) to risk-taking, contribute to discipline debtors' behaviour, and are structural components of the enforcement of credit contracts.[16] Ex post, insolvency rules also play the fundamental role of selecting between companies to be liquidated and the ones deserving a further chance, as well as providing the modality of such re-start. Regarding these specific issues, various bankruptcy instruments and practices can be grouped into three main typologies. In all legal systems, the most traditional device consists in the collection of the debtor's assets, their sale on the market, and the distribution of the proceedings among claimants in proportion to their credits. This is a procedure that in Italy takes the name of fallimento (bankruptcy). By definition this mechanism is a pure credit-collection device and does not provide any solution to the problem of companies' selection and restart. A variation on the same theme implies an agreement with creditors about a share of debts to be paid (composition or concordato fallimentare in Italian). In the case of personal bankruptcy this procedure eliminates the condition of 'bankrupt' allowing the debtor to re-enter the business

world, but as far as companies are concerned, compositions do not avoid their disappearance. Fallimento and concordato fallimentare have been in use in Italy since the oldest commercial code dating back to 1865.

The second possible way to deal with insolvency consists of an agreement with creditors before the bankruptcy procedure takes place, an instrument that in Italian takes the name of concordato preventivo. These kinds of ex ante agreements provide the opportunity for companies to survive as long as they do not need to be liquidated in order for debtors to find enough financial resources to pay the agreed amount. This solution became available in Italy in 1903[17], and until 1942 it was the only formal instrument that could save insolvent firms, run by 'honest but unlucky' entrepreneurs, from liquidation. In their practical implementation, the ability of these agreements to avoid companies' disappearance depends on two interrelated elements. Firstly, the level of the minimum share of debts that firms had to guarantee, ex-ante, to be able to pay in order for the court to approve the deal; the higher this threshold, the stronger the probability that a firm would had to liquidate to fulfil this criterion. Secondly, whether the option exists to transfer all the company's assets as one single indivisible entity to creditors (cessione d'attivo). Apart form the immediate advantage of preserving firms' integrity, this procedure also allows debtors to afford higher payments, as the value of an ongoing concern is usually higher than the market price of its components when sold separately. Thus cessione d'attivo, if available, might counterbalance the problem of the high minimum threshold of debts re-payment, making more firms eligible for compositions with creditors. On the basis of these issues, the Italian procedures look particularly badly suited to facilitate firms' survival. In fact, until a reform passed in 1930, in Italy debtors filing for concordato preventivo had to guarantee the payment of at least forty per cent of all unsecured debts, the highest threshold in the Western world.[18] On the other hand the cessione d'attivo remained legally impossible in Italy for longer than in other systems.[19]

The third general way to deal with insolvency implies the declaration of debt moratorium. This might be associated to the replacement of management and/or to the provision of a re-launch program. It goes without saying that the latter condition is crucial in ensuring the company's survival, unless problems are either temporary or superficial enough to be automatically solved by the mere appointment of new management. In the case of the provision of a re-starting plan, it is also of fundamental importance to have a procedure able to lock-in possible reluctant creditors.[20] In the Italian system, the first form of moratorium appeared in 1882 but it was abolished in 1903 as a result of its disappointing performance.

This tool, in fact, remained a purely theoretical option, as it allowed only debtors whose assets exceeded liabilities to file for it. In 1942 a new procedure called amministrazione controllata arrived on the scene.[21] In this case a yearlong moratorium was associated to the appointment of a new management whose members were chosen among public officers. Conditions for filing for amministrazione controllata were not as strict as for the previous moratorium but, interestingly, court approval did not depend (at least according to the formal character of the law) upon an analysis of technical competences, managerial ability, and more in general on the future viability of the company.[22] Furthermore, this institution did not contemplate any specific directives on how to solve the crisis, other than the generic (and optimistic) assumption that problems would be solved in one year by the new management. Finally, in contrast with the American and English procedures, the law provided no incentive for investors to re-capitalise the company and to give it a real 'fresh start'.

Although not necessarily part of the official procedures, a fourth possible solution to insolvency can be found in voluntary liquidation. This is largely a preventive strategy, as voluntary liquidation is in general allowed only to solvent firms that can prove to be potentially able to pay all debts.[23] Recourse to voluntary liquidation helps to keep firms alive only in the case in which it is statutorily linked to a re-starting plan; in other words, once the company is liquidated an attempt must be made to use all its assets to reconstitute another firm. Having a statutory restructuring clause, however, is only a necessary condition for voluntary liquidation to be turned into a continuation-prone device, but it is by no means a sufficient one. In fact, as in the case of moratorium, a further issue regards the ability of the institutional mechanisms surrounding liquidation to lock-in potentially reluctant creditors. These two problems, for example, were explicitly addressed in the English case.[24] Under the Italian law voluntary liquidation was granted to any company formally able to guarantee the payment of all debts. Furthermore, in circumstances where companies had lost more than one third of their capital, the Italian commercial code obliged them to choose between re-capitalisation and liquidation. [25] However, no restructuring plan was required to file for voluntary liquidation, and creditors not only had no legal incentive or constrain to support the re-launch plan (if any was put forward), but actually any single creditor had the right to declare the company bankrupt at any stage of the voluntary liquidation process if the firm failed to meet a debt of any size.

To sum-up, the Italian legislation seems to have had serious limitation in terms of its ability to guarantee companies' continuation. Although the instruments provided were not dissimilar from the ones available in other countries, idiosyncratic features might have made

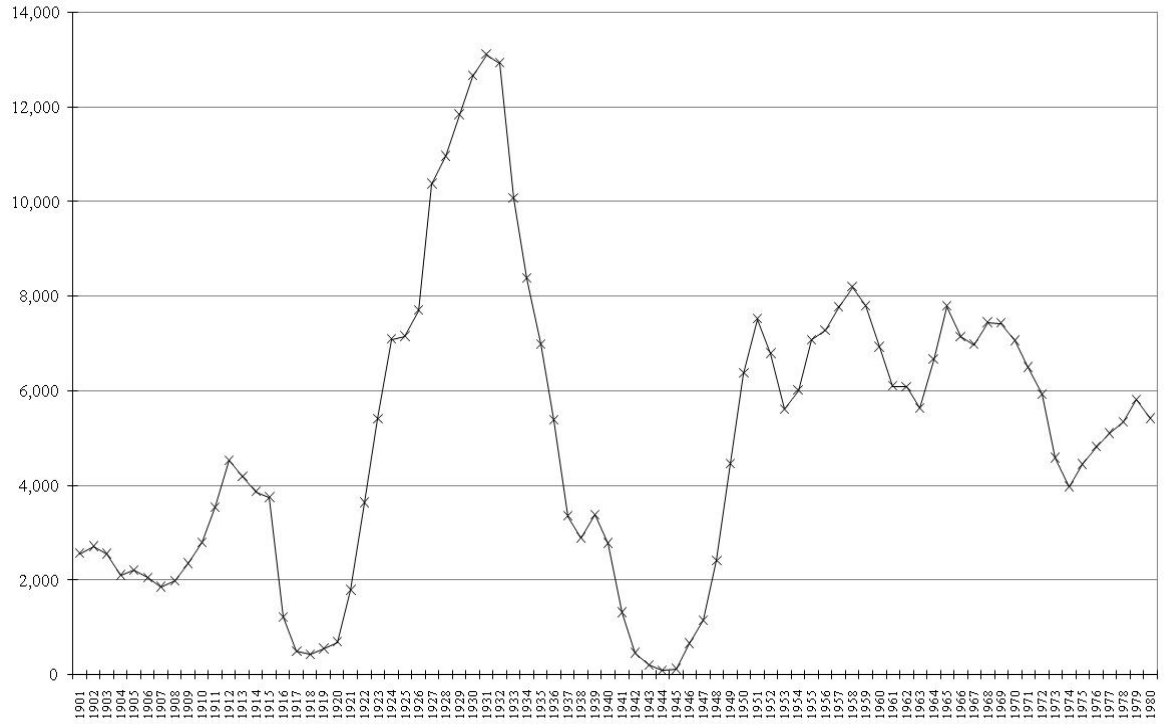
the alternatives to liquidation either complicated to obtain or ineffective. Using both quantitative and qualitative evidence in the next three sections we will test this hypothesis.

II

In this section we analyse the relative degree of adoption of the various procedures – fallimento (including concordato fallimentare), concordato preventivo and amministrazione controllata – that companies could use when facing insolvency problems.

Graph 1 shows that the number of fallimenti moved to its peak during the big crisis of late Twenties reaching its all-time pitch in 1931 (13,102 cases). The number of fallimenti then began to decrease. It must be noted that during both World Wars the amount of these procedures was extremely low, particularly during World War II when it reached its minimum level (91 in 1944). This result is probably due to the stagnation of economic activity during wartime, and in particular to the general inefficiency and inactivity of the legal bodies in charge of the administration of bankruptcy and insolvency procedures. Thus, the observed peak in the number of fallimenti in the post-wars years is partially explained by the re-staring of court proceedings.

Graph 1. Number of *fallimenti* (1901-1980)

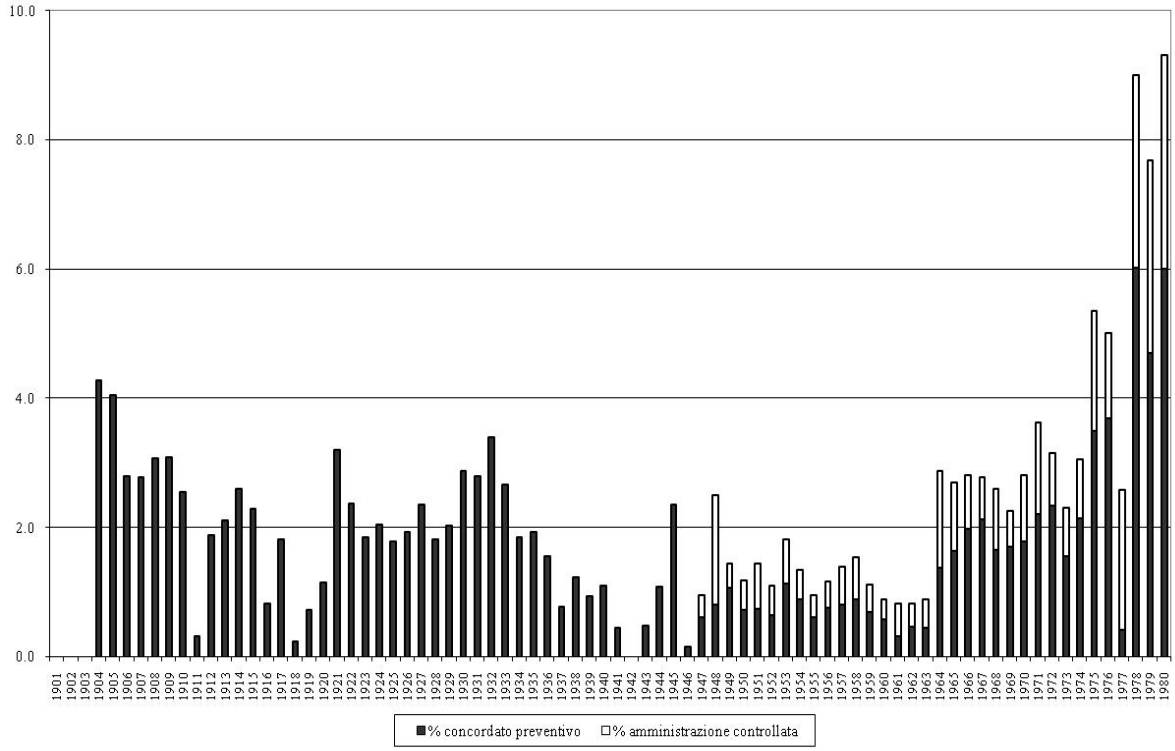


Sources: our own elaborations on Istat, *Annuario* [various years].

It is worth noticing that in the period under investigation the number of fallimenti shows no linear relationship with economic fluctuations. On one hand, during the downturn of the Thirties the number of procedures increased, confirming the inverse relation between the amount of fallimenti and the economic cycle. On the other hand, however, during the crises of the Seventies the number of fallimenti did not rise, as one would expect. A possible explanation of this mismatch can be linked to the character of firms' demography, taking into account that in a period of crisis it is possible to expect a lower level of birth of new firms. Since relatively younger (and smaller) companies were particularly prone to become insolvent[26], this means that during crises the segment of firms' population more exposed to this problem was smaller, even if the average probability of insolvency increased in general. As a consequence the link between macroeconomic performance and insolvency is weakened.

As far as the relative use of different procedures is concerned, Graph 2 and Table 1 show that fallimento (bankruptcy) was the most wide-spread device during the whole period, representing more than ninety per cent of total cases, notwithstanding the introduction of alternatives in 1903 (concordato preventivo) and 1942 (amministrazione controllata).

Graph 2. Percentage of *concordato preventivo* and *amministrazione controllata* on total procedures (1901-1980)



Sources: our own elaborations on Istat, *Annuario* [various years].

During the first few years after its appearance on the scene, concordato preventivo accounted for about 4 per cent of total procedures, but in the following period its use decreased considerably. The introduction of amministrazione controllata in 1942 did not alter this picture either. During the Forties and the Fifties, fallimenti accounted for about 98 per cent of the total procedures, while concordato preventivo and amministrazione controllata made up, together, only the remaining 2 per cent. Their use began to grow only at the end of the Seventies when the two procedures together made up about ten per cent of the total. This seems to show that neither of the new procedures was able to reach the aims for which they had been introduced. The analysis of the data also shows that amministrazione controllata was not able to substitute concordato preventivo.

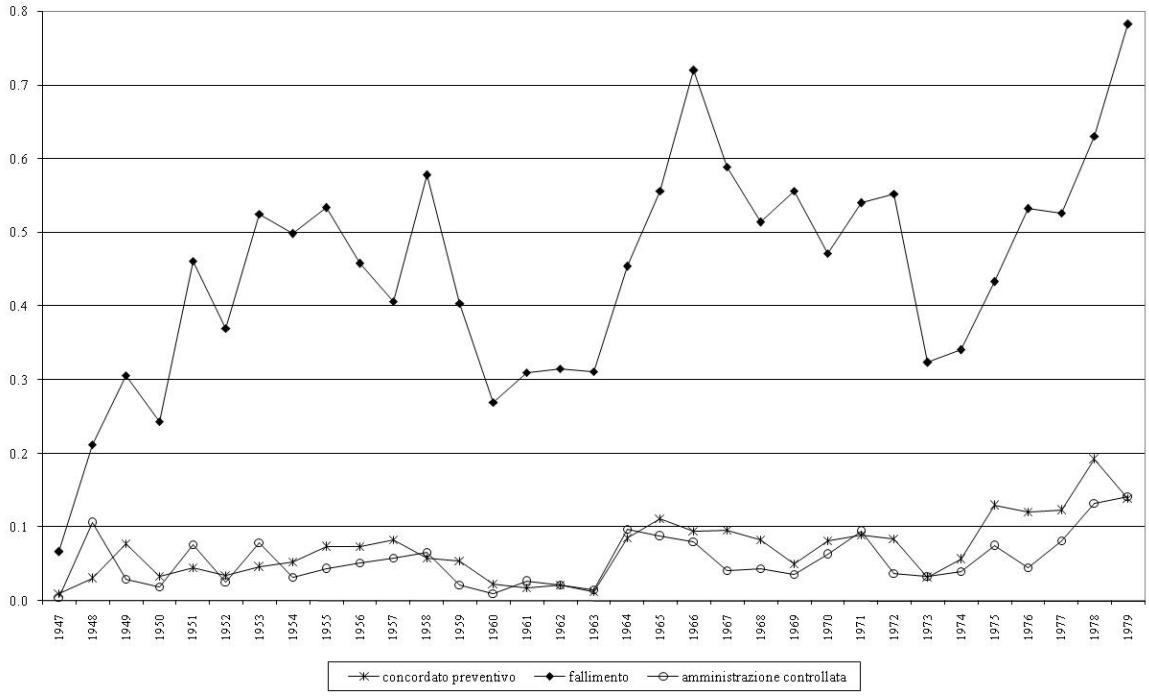
Tab. 1 Average number of *concordato preventivo, fallimento,* and *amministrazione controllata* in a period of five years (1901-1980)

Period	*Concordato preventivo*	*Fallimento*	*Amministrazione controllata*
1901-1905	94	2,427	
1906-1910	65	2,209	
1911-1915	76	3,973	
1916-1920	6	672	
1921-1925	105	5,011	
1926-1930	245	10,701	
1931-1935	281	10,289	
1936-1940	42	3,555	
1941-1945	3	440	-
1946-1950	25	3,007	23
1951-1955	53	6,600	35
1956-1960	58	7,590	37
1961-1965	60	6,450	53
1966-1970	137	7,210	59
1971-1975	123	5,084	61
1976-1980	243	5,294	148
Total average	***102***	***5,126***	***61***

Sources: our own elaborations on Istat, *Annuario* [various years].

Another important point that emerges from the analysis concerns joint-stock companies. As we can see in Graph 3, during the whole period, the percentage of joint-stock companies that used any official procedure was very low, remaining below the threshold of the 1 per cent of the total. In other words, officially only less than 1 in one hundred companies in the country seemed to have faced insolvency problems.

Graph 3. Quota of joint-stock companies using various insolvency procedures on the total population of Italian joint-stock companies (1947-1979)

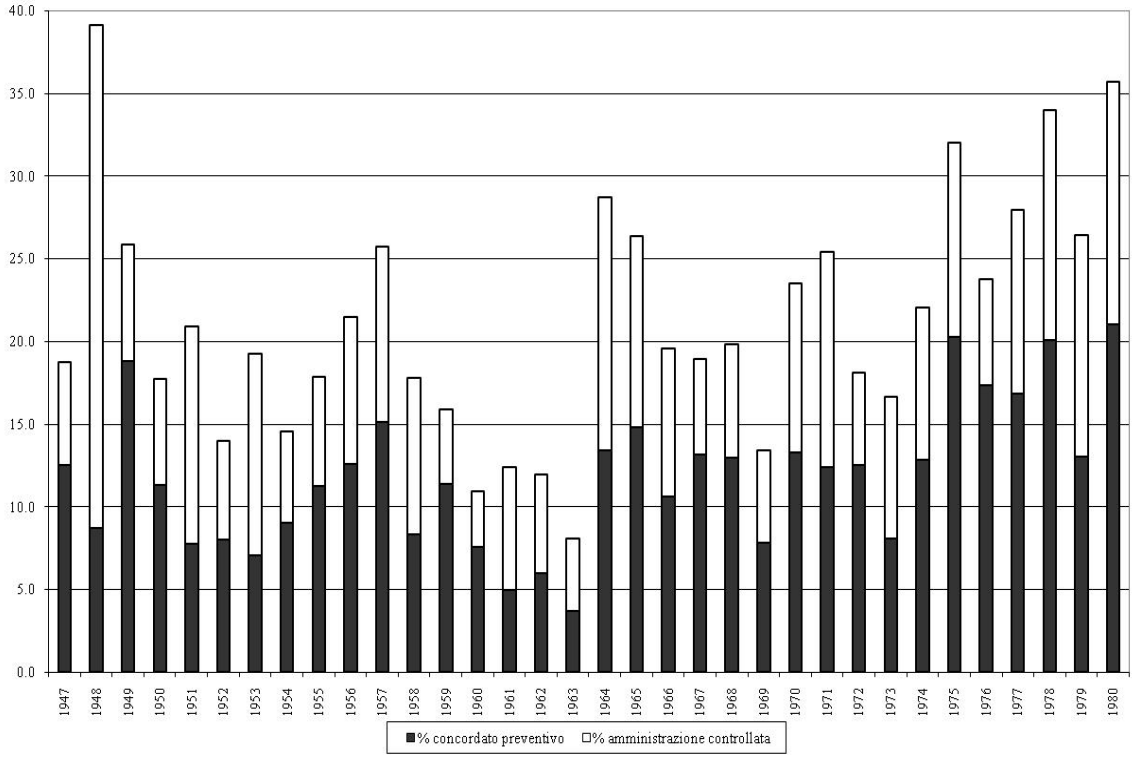


Sources: our own elaborations on Istat, *Annuario* [various years].

As far as the different procedures are concerned, joint-stock companies mainly used fallimento, and the quota of businesses filing for concordato preventivo and amministrazione controllata accounted for 0.1 per cent of the total companies' population. These data show that for joint-stock companies all procedures plaid a marginal role.

Data disaggregated in terms of typology of debtor are available only since 1947 (Graph 4). The comparison between graph 4 and graph 2 shows that joint-stock companies made recourse to concordato preventivo and amministrazione controllata differently as compared to other kind of businesses. Even if for joint-stock companies the quota of fallimenti on total procedures still prevailed (79 per cent in average during the period), the percentages of concordato preventivo and amministrazione controllata were considerably higher (11.9 per cent the former and the 9.4 per cent the latter in average during the period) than in the sample including all types of businesses. In the Seventies in particular, for joint-stock companies the quota of the sum of these two procedures seems to become stable around twenty-five per cent of total procedures.

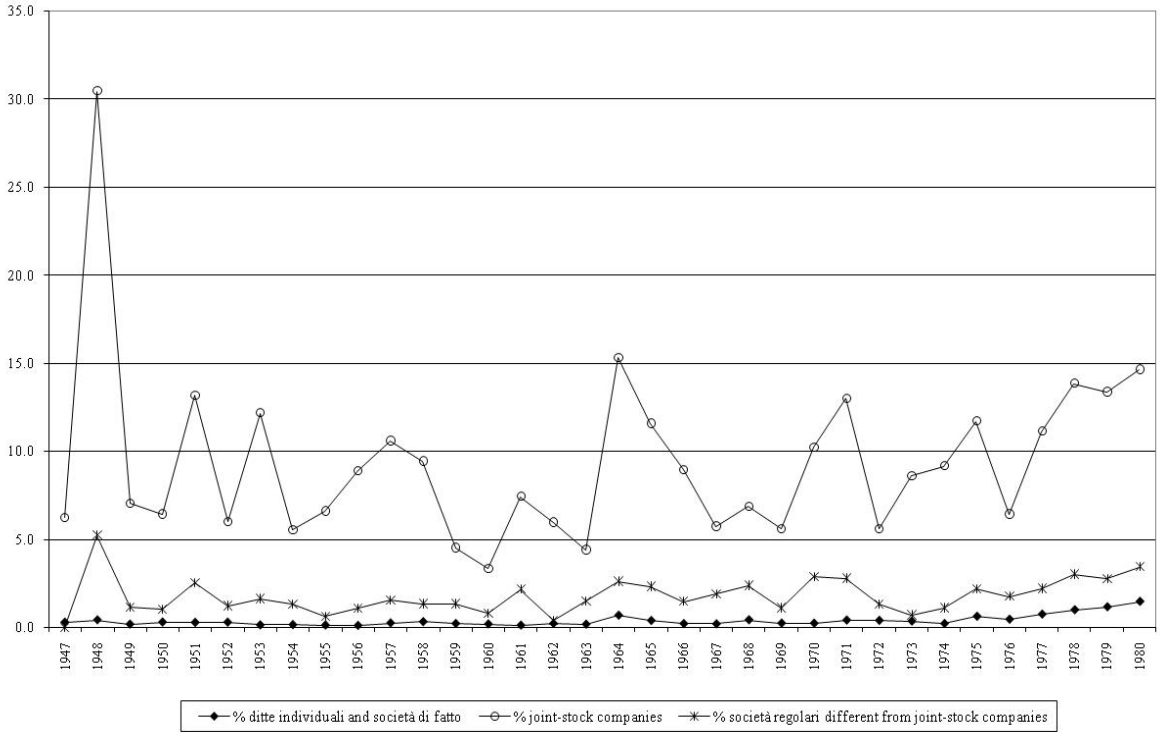
Graph 4. Joint-stock companies: percentage of *concordato preventivo* and *amministrazione controllata* on total procedures (1947-1980)



Sources: our own elaborations on Istat, *Annuario* [various years].

This suggests that the use of amministrazione controllata as a tool to avoid fallimento and to allow firms continuing in business varied widely amongst different types of businesses (Graph 5). In particular, we can note a negligible use (0.4 per cent on total on average) of these procedures for the ditte individuali (sole ownership) and the so-called società di fatto (irregular companies) particularly prone to use fallimento (98.7 per cent on average). This is typical for small firms that were more exposed to failure either in a start up phase or as a natural solution to the problem of inheritance in case of death of the owner of the business. The use of this procedure was also marginal (1.8 per cent on total on average) for the so-called società regolari[27] that filed for fallimento in the 95.2 per cent on cases. On the other hand, joint-stock companies had a wider usage of amministrazione controllata (9.4 per cent on average) and a lower use of fallimento (78.7 per cent on average) than any other kind of businesses.

Graph 5. Distribution (in percentage) of different kind of businesses using *amministrazione controllata* (1947-1980)



Sources: our own elaborations on Istat, *Annuario* [various years].

Tosum-upe, the analysis suggests that fallimento and concordato fallimentare were and remained by far the most widespread procedures. Their alternatives found, in general, relatively little use, although they proved to be much more popular among joint-stock companies (twenty per cent on average) than among any other type of firms. On the one hand, however, only a very small number of joint-stock companies got involved in any kind of official procedures at all (the maximum, reached in 1979, was 1.1 per cent of the total population).

III

The quantitative analysis thus points out that Italian joint-stock companies made very little recourse to official procedures and, when this happened, they tended to use credit-collection devices such as fallimento rather than re-starting mechanisms such as concordato preventivo. These results generate two questions. The first one is why, among official devices, re-launch-oriented procedures were underused. The second issue is whether the very low number of joint-stock companies filing for any kind of official procedures must be seen

as a sign of high stability or, in fact, only hides the fact that unofficial devices were used instead. If this were the case, we must also investigate which kind of extra-judicial solutions existed and the way they functioned.

In order to answer these questions, we use qualitative information about various companies that in the period under analysis faced insolvency problems. In this section and in the next one we focus on the interwar period (when concordato preventivo was the only alternative to fallimento), while section V addresses the post 1942 period to see whether or not the introduction of amministrazione concordata changed the picture.

The qualitative analysis is mainly based on information from the archive of the Chamber of Commerce of Milan, in particular the section denominated 'Imprese fallite e relazione dei curatori fallimentari' (shortly, ACCM/If.). The ACCM/If sample contains information about the joint-stock companies that went insolvent in Milan and its province between 1922 and 1935. Out of the two hundred and fifty-six cases, information exceeding just the name of the company and the year of insolvency are available for one hundred and fifty-three companies including, in some cases, the reports written by the curatore fallimentare which provides extensive and detailed description on the history of the company, the causes of insolvency, the capital structure, and the outcome of the procedure. While ACCM/If provides the bulk of the information, two other sources are used as a complement. The first one is the Bollettino Ufficiale delle Società per Azioni (shortly BUSA) which is the official Italian bulletin of limited-liability companies. This source lists yearly (desegregated by provinces) the names of companies that ceased to exist, and for some of the firms also provides an extremely summarised description of the circumstances under which they disappeared. The other source comes from the section of the archive of the Milan Chamber of Commerce called Archivio Ditte (shortly, ACCM/Ad). It contains files relative to individual firms recording all major changes such as liquidation, bankruptcy, merger to or acquisition by other companies, and so on. Unfortunately information from ACCM/Ad is much less detailed and precise than the one provided by ACCM/If, and often available only for a limited number of cases.

Starting with the outcome of procedures, the analysis of the ACCM/If sample provides results in line with the national trend (Table 2). Bankruptcy (ordinary fallimento) was by far the most widespread procedure, leaving to concordato preventivo only a very marginal role. It must be noticed that among bankruptcies there were a few examples of proved frauds leading to bancarotta fraudolenta, a share of concordati fallimentari, and some cases that were closed

via the so-called insufficienza d'attivo, a specific procedure conceived to deal with companies whose remaining assets were not even enough to cover the legal fees.

Tab. 2 Insolvency in Milan by outcomes (1922-1935)

Bankruptcy							**Concordato preventivo**	**No info**	**Tot.**
Bancarotta Fraud.	*Bankruptcy and/or Bancarotta fraud*	*Ordinary Bankruptcy*	*Ordinary Bankruptcy and/or Concordato fallimentare*	*Concordato Fallimentare**	*Insufficienza d'attivo*	**Tot**			
2	6	110	5	18	4	**145**	2	6	**153**

Note: * of which 17 declared and 1 suggested.

Source: ACCM/If.

At first glance, the very marginal role played by concordato preventivo would induce us to believe that the large majority of insolvent firms in Milan were not in the position of successfully filing for it, either because of their desperate conditions (and therefore unable to guarantee the payment of the required minimum percentage of debts), or because the cause of the insolvency did not fit the legal principle of being 'honest but unlucky'.

A deeper analysis, however, reveals that a number of formal and substantial requirements made concordato preventivo extremely hard to reach even for companies that were neither desperate nor fraudulent. The first problem was that, for most of the period under study, the *ex ante* legal minimum percentage of debts that companies had to guarantee to be able to pay was very high (forty per cent), a problem that generates a very strong selection amongst potential applicants. Looking for example at the seventeen cases of concordato fallimentare for which evidence is available, we can see that, apart from 4 cases, all other companies paid a share of debts equal or higher than twenty-five per cent, the threshold that was necessary in England to file for deeds of arrangement, the equivalent of the Italian concordato preventivo. In other words, there was a pool of companies that in another legal system could have been able to benefit from more lenient instruments. The problem, however, was more complicated than that, as being able to pay ex post a given share of debts was different from being in the position of ex-ante guaranteeing a given amount of payment. This could be a reason why even companies that at the end of various procedures paid a share of debts equal or above 40 per cent or even the full amount, did not file for (or did not obtain) concordato preventivo.[28]

The guarantee of a high minimum statutory payment was far from being the only or main difficulty in getting concordato preventivo. According to the law, applicants had to pass a double independent screening by the court first, and then by creditors. These two stages were completely independent from each other as proved by cases in which creditors turned down deals already approved by the court, also when extra guarantees were provided.[29] On top of the problem of passing two different and independent assessments, companies filing for concordato preventivo had to deal with procedures that were formally complicated and suffered from lack of correct information and coordination among decision-makers. At courts' level, the complexity of the formal requirements could be already enough to discourage potential applicants.[30] An even more significant problem than the complexity of the procedures was the substantial partiality and lack of information that characterised the decision making process. Because of the functioning of the procedure, the commissario giudiziale - the person in charge of writing the report that courts used to decide on whether or not grant concordato preventivo - could use a much more limited amount of information that the one available to the curatore fallimentare - the person that managed the bankruptcy procedure.[31] In practice it seems that in the Italian procedure much more attention was dedicated to the analysis of the case after the declaration of bankruptcy than before. This is something that, for example, did not happen in England (at least in case of personal bankruptcy), where the same report was both used before bankruptcy (to allow or disallow a deed of arrangement) and after it (for example in deciding about the debt-discharge). Similar problems of partial information, complicated by issues of coordination, also surfaced at the level of creditors' scrutiny; by operating in the alleged maximisation of personal interest, single creditors often failed to foresee the best actual opportunities, with the result that the wide-majority-based procedures meant incredible obstacles to reach concordato preventivo even for worthy business. This problem is well emphasised in the case of the company Fonderia di Desio, able to offer a friendly agreement on the basis of the payment of fifty per cent of debts, a deal turned down because blind and uncoordinated self-interested creditors ('everyone is looking after their own interest', as the curatore fallimentare stated in his report) expected to get a higher percentage of credits re-payment via the bankruptcy procedure. As a result, the company was pushed into bankruptcy, but the curatore fallimentare made it clear that it would be 'impossible' to expect a percentage of payment 'close to the one offered during concordato'.[32]

From the analysis conducted above it appears that filing for and obtaining concordato preventivo was in general a very complicated affair. A further, and probably even more

significant problem is that these difficulties applied to all types of companies, well run and potentially innovative as well as fraudulent, innovative and entrepreneurial as well as conservative. In other words, it seems that the function of virtuous selection among companies, fundamental in any pro re-start insolvency norm or practice, was very badly performed by concordato preventivo. Neither the formal requirement of the law, which was based on the combination of the fuzzily defined principles of 'bad luck and honesty', nor judges' behaviour ensured a preferential treatment to potentially viable and/or innovative firms. Evidence of this problem can be inferred by looking at the level of viability and innovativeness and of the companies in the ACCM/If sample. Table 3 provides a breakdown of the sample according to the causes of insolvency and on this basis divides between unviable and viable businesses. The former category includes companies, whose insolvency was caused by purely fraudulent/speculative behaviour from the very beginning, by frauds committed during normal activity, by structural inefficiency leading to the inability to compete on the market, including when such inefficiency depended on sector crisis. The latter is composed by companies that operated in potentially successful markets in which they could competitively sell goods or services, but that were pushed into insolvency by bankruptcy of their own debtors, lack of capital, mismanagement, exogenous short-term shocks, or a combination of these elements.

Tab. 3 Insolvency in Milan by causes (1922-1935)

Viable	Bankruptcy of debtors	1
	Bankruptcy of debtors/lack of capital/mismanagement	2
	External shocks	1
	Lack of capital	9
	Lack of capital/mismanagement	6
	Mismanagement	7
	Mismanagement/lack of capital/external shocks	1
	Total viable	**27**
Unviable	Fraud	4
	Fraud/lack of market	1
	Fraud/structural inefficiency.	1
	Lack of capital/lack of market	2
	Lack of capital/lack of market/mismanagement	4
	Lack of capital/mismanagement/sector crisis.	2
	Lack of capital/sector crisis	1
	Lack of market	9
	Lack of market/mismanagement	1
	Lack of market/Structural inefficiency	3
	Mismanagement/fraud	1
	Purely speculative/sham/fraudulent	25
	Sector crisis	4
	Sector crisis/structural inefficiency	2
	Structural inefficacy	36
	Total unviable	**96**
Unknown	Unknown causes	29
	Mismanagement/borderline behaviour	1
	Total unknown	**30**
Total sample		***153***

Source: ACCM/If.

The rational for such categorization is that firms in the latter category had the potential to be successful once re-capitalised and/or the management was replaced. Even if this desegregation is somehow arbitrary, still the evidence suggested a remarkable disproportion between the number of potentially viable companies (27) and the number of concordati preventivi allowed (2).

A similar test has been run by considering the sector of activity and dividing the sample between the companies involved in innovative activities from others operating in traditional fields.[33] Table 4 shows that the number of innovative companies in the sample is not negligible, but this finds no parallel in the number of concordati preventivi allowed.

Tab. 4 Insolvency in Milan by level of innovativeness (1922-1935)

Innovative	Innovative Chemical	6
	Development of patents	1
	Electric engineering	9
	Pharmaceutical	2
	Filmmaking	3
	Innovative mechanical engineering	5
	Mechanical/electrical engineering	2
	Special cases	*3*
	Tot. Innovative	**31**
Traditional	Advertising	2
	Agriculture	3
	Building	3
	Building/estate agency	3
	Traditional chemical	1
	Entertainment/Tourism	10
	Estate agent	2
	Food and drink	6
	Furniture	1
	Glass	1
	Leather	1
	Traditional mechanical engineering	4
	Metalworking	6
	Mining	2
	Paper	3
	Printing/publishing	9
	Retail trade	14
	Shoemaking	1
	Special cases	*1*
	Textile	17
	Retail and wholesale trade	6
	Transport	2
	Wholesale trade	13
	Wood	2
	Tot. Traditional	**111**
Unknown		**9**
Tot. sample		**153**

Source: ACCM/If.

These results suggest that at the aggregate level variables such as innovativeness or future viability played a minor role, and qualitative analysis supports this view. The company Giglio**,** for example, was a very innovative company, almost the stereotype of the 'Schumpeterian' model, as in the early 1920s it first produced a prototype of side lights for cars. Despite the unquestionable validity of the product, the market proved not to be ready yet, and the company was pushed into bankruptcy, without even the benefit of concordato preventivo.[34] It is also interesting the case of the Società Anonima Combustibili [35] which was condemned to bankruptcy even if its insolvency was largely due to an external, unavoidable, short-term shock such as the crisis of the Banca Italiana di Sconto[36]. More in general, the analysis of the only two surviving records of court decisions on whether to grant concordato preventivo also supports the view that issues of innovativeness or viability were not taken into account. In the case of the company De Capitani & F.lli for example the court was very strict in looking at the guarantees provided and the modality of payment, but these were the only criteria considered. There is no mention of the possibility or convenience of re-launching the company, or of the fact that its actual difficulties were largely linked to one single debtor towards which the company is too exposed. In practice only the convenience of creditors was taken into account.[37]

IV

Section III shows the problems that even potentially viable companies faced in filing for concordato preventivo. This contributes to explain why, among official procedures, fallimento remained by far the most used one. On the other hand, the fact that these tools were so badly conceived and implemented can also explain why so few companies used any kind of official procedure at all.[38] If this were the case, it is also relevant to investigate the extent (if any) to which unofficial solutions were used, and whether they represented a better alternative, in particular in terms of allowing companies to restart. The first step of this analysis is to provide a rough estimate of the ratio between the amount of companies stopping their activity and the actual number of official insolvency procedures. In the case of Milan this is possible by comparing information from the BUSA sample (which for every year provides the list of companies which interrupted their activity disaggregated by province) to information from ACCM/If about the number of firms that every year used official insolvency procedures. Focusing on the benchmark year 1924, the BUSA indicates that one hundred and sixteen

joint-stock companies exited the market in Milan and the province, but according to the ACCM/If only twelve cases of insolvency had been declared. Even taking into account that among the hundred and sixteen cases reported by the BUSA, 2 joint-stock companies disappeared to be re-created as partnerships, 8 businesses reached the end of their expected life or were just branches of other companies, and 6 of them were banks or insurance companies that have not been included in the ACCM/If sample, still the discrepancy is noticeable.

It is evident therefore that joint-stock companies looked for alternatives to the official procedures provided by law using, in particular, voluntary liquidation. In theory the use of voluntary liquidation is a perfectly legitimate strategy for firms that, facing difficulties and having no prospect of re-launch, decide to put an anticipated end to their life before running into further trouble. In Italy, however, the peculiar harshness and inefficiency of official insolvency procedures could have generated the tendency to rush into liquidation even in cases in which companies were in the position of trying to defend their business or restructuring and starting again, with the result that potentially viable and successful companies found a premature death. In this regard it is particularly revealing that companies, sometimes successfully, often tried to find an agreement with creditors only after that first attempt to liquidate failed.[39]

To some extent the rush into liquidation was also the result of the already-mentioned norm of the commercial code, which imposed to firms that had lost one third of their capital, either to re-capitalise or to liquidate. Evidence of the frequency of this problem can be inferred from the BUSA sample for 1924, where cases of companies that decided to liquidate because of the inability to raise new capital on the market are easy to find.[40] Although this problem is clearly linked also to the working of the Italian credit market, therefore outside the scope of this paper,[41] it also sheds light on the fact that the Italian procedure did not contemplate any mechanism to make the re-financing of a potentially viable company an alternative more appealing than its liquidation. In particular, while in England and the US voluntary wind-up was often the first step towards restructuring via specific legal procedures, also conceived to counterbalance the action of a minority of reluctant creditors, in Italy restructuring was allowed, but it was not protected by any specific legal device. This again led to the disappearance of potentially viable companies. The Società Elettrotecnica is a good example.[42] It was put into liquidation in 1924 and terminated the procedure in 1930. Since 1928 administrators foresaw the possibility of future new business and decided to temporarily suspend liquidation, in order to keep current activity to a minimum, and to wait for the

moment to present a restructuring plan. The pursuit of this strategy however had to be interrupted because the company found it impossible to find an agreement to procrastinate the payment of already-due taxes. In practice it was the state that, operating as an ordinary creditor, created an insurmountable obstacle to attempt the company's re-launch.

The absence of norms constraining creditors' action meant not only that the option of restarting became rather complicated, but also that embarking on voluntary wind-up did not protect at all against the possibility of the company being pushed into bankruptcy anyway. The law established that during liquidation any unsatisfied creditor (even a single one) could declare the company bankrupt if it failed to meet any liability. This problem did not only concern relatively unstable companies, but also sound ones were exposed to it, as liquidation was often a long and complicated procedure open to risks of all kind, in particular to severe devaluation of assets price. A measure of the extent of the problem can be inferred from the ACCM/If sample in which thirty-one companies became bankrupt during the liquidation process. Even if the majority of these companies had structural problems, having therefore little expectation of avoiding bankruptcy in any case, some of them were not so troubled. Examples can be found of firms pushed into bankruptcy despite having started the liquidation process with a level of assets exceeding the nominal value of liabilities, sometimes because of the action of one single creditor.[43] Particularly revealing is the case of the company Federazione Casearia Italiana, whose successful liquidation turned into bankruptcy because of one single creditor owning a credit worth thirty thousands lira against the company net worth of about2 millions.[44]

V

The analysis in sections III and IV indicates that neither official procedures nor informal alternatives were well equipped to successfully address the problem of companies' re-starting. On the one hand, official devices such as concordato preventivo were hard to achieve, were not linked to considerations about innovativeness or viability, and scarcely connected with companies' restart anyway. Voluntary liquidation was not an efficient alternative without any automatic link to re-starting plan and the possibility to limit creditors' power.

In 1942 a specific formal device called amministrazione controllata was provided with the explicit aim of addressing the problem of avoiding the disappearance of potentially viable companies. As stressed in section I the new institution was based upon the principle of the replacement of management in the expectation that this would be enough to solve companies'

crisis. In the light of the argument of this paper, the questions to answer are firstly, whether or not the new institution was a viable alternative to concordato preventivo and fallimento (i.e. how simple it was to use it) and secondly, if a company managed to obtain it, the extent to which amministrazione controllata represented a better solution to the problem of re-starting.

The first point can be addressed initially by reconsidering the result of the quantitative analysis, which showed that although amministrazione controllata proved to be much more popular among joint-stock companies than among any other type of business, in quantitative terms it usage never really took-off.

Qualitative analysis is made hard by the fact that very little direct evidence, if any at all, can be found about the reasons why and the conditions under which companies decided to file for amministrazione controllata, or the way in which applications were analysed by courts. In fact, information from BUSA is extremely sketchy, while no case of application for amministrazione controllata has been found when looking at cases from the ACCM/Ad sample. A way of bypassing this problem is to use a counterfactual argument by looking at the problems companies faced before 1942 and asking 'what if' amministrazione controllata had existed at the time. This institution relied mainly on management replacement, and certainly mismanagement was a very widespread cause of insolvency during the interwar years. The analysing of the ACCM/If sample shows that mismanagement was the sole or main cause in 7 cases of insolvency, and played a part in other eighteen examples (Table 3). Often companies that suffered from mismanagement were potentially successful businesses operating in buoyant markets.[45] If we exclude the circumstances where mismanagement was also in conjunction with fraud or other causes of structural inefficiency, in the other cases amministrazione controllata, if it had existed at the time, would have been a good solution.

The other issue that must be considered in assessing the potential appeal of amministrazione controllata, is that management replacement made sense only for companies with a clear distinction between ownership and control and with effective managers' independency. This was certainly not the rule in the ACCM/If sample in which a large number of companies appear to be small and without a real professional management, often being just small partnerships or even sole ownerships only formally transformed into limited-liability corporations. As Table 5 suggests, a large number of companies just reached the threshold of ten thousands lira of capital, an amount judged 'laughable' by a contemporary receiver.[46] On top of this, even among bigger companies there were other twelve cases of either purely made-up capital, or circumstances where no real management-property

distinction could be drawn. This problem *per se* simply disallowed a significant share of companies from filing for amministrazione controllata.

Table 5. Insolvency in Milan by size (1922-1935)

(Nominal capital in thousands Lira)

Size		11-50	**Tot. under 50**	51-100	101-300	301-500	501-999	1000 or above	Unknown	**Tot. Sample**
Number of companies	33	31	**64**	13	18	16	5	14	23	**153**

Source: ACCM/If.

Apart from the extent of its application, a further problem is whether or not amministrazione controllata, when used, gave better results that concordato preventivo or liquidazione volontaria in terms of allowing good companies to restart. In this case, too, direct qualitative evidence is hard to get, but a counterfactual analysis can be run. One major problem that constrained firms' restart was undercapitalisation and the necessity to lock-in creditors in the process of re-launch; cases of potentially successful companies needed an injection of fresh financial resources have been found in the ACCM/If sample.[47] However, amministrazione controllata provided no solution at all to these problems.

Not surprisingly, the two issues of small size on the one hand, and the need for the injection of new financial resources on the other, were strictly connected. As a matter of fact, the vast majority of small companies, whose size and structure made management replacement nonsense, were also most likely victims of undercapitalisation and most of them needed new credit resources to re-start. Small businesses just matched the legal threshold in terms of net worth and had to rely massively on short-term external financing. This structure made companies particularly vulnerable to cyclical or exogenous shocks and, even when viable, particularly exposed to the action of creditors. Among various cases taken-down in the ACCM/If sample, the firm Edizioni Pervinca is a particularly revealing example of a small and undercapitalised company for which the existence of amministrazione controllata would have made no difference. Edizioni Pervinca was a successful business but lacked net worth and relied massively on short-term commercial credit (up to about ten times the capital). When short-term problems arose in the form of a deep disagreement between two major

stockholders, the company entered a phase of crisis and proved unable to cope with pressure from various creditors.[48]

To conclude, when tested against the real problems faced by insolvent firms, amministrazione controllata appears to be a poor alternative to concordato preventivo, in terms of both applicability and its actual ability to re-launch companies. It was probably adequate to address issues of mismanagement in big corporations, but useless for small companies and completely unequipped to tackle problems of creditors lock-in.

VI

During the twentieth century Italian joint-stock companies remained small and died young, struggling to develop into 'coesian' firms. The difficult rise of companies with fully developed organisational capabilities meant lags and limitations in the introduction of the most advanced technologies and managerial techniques and, more in general, an artificial constraint to the development of the full potential of the Italian industrial sectors.

This paper shows that the functioning of insolvency and bankruptcy laws and procedures can be included among the causes of this problem. Despite being formally similar to the ones existing in other systems, in Italy various legal devices available to deal with corporate failure were inadequate in their function of selecting among companies and providing efficient re-launch mechanisms. In its practical implementation the system was and remained liquidation-prone, and insolvency, the result of either natural cyclical fluctuations or of exceptional crisis, took a disproportionate toll on the Italian industrial system.

Before 1942 concordato preventivo was the only official procedure that contemplated, at least on paper, the possibility of avoiding liquidation and to allow companies to re-start. Data show that this institution was rarely used, and qualitative analysis reveals that this was due to the strictness and formal complications of the criteria to be fulfilled in order to obtain it. The study of archival sources also shows that innovative or viable companies did not get any preferential treatment.

The general inefficiency of concordato preventivo (and the strictness of fallimento) pushed companies to search for alternatives, found in the large, and often premature, use of voluntary liquidation. This solution, however, was no better alternative to concordato preventivo in terms of re-launching potentially viable companies, as voluntary liquidation was not, as in the American or English system, automatically linked to a re-starting plan, nor it provided any defence against the action of reluctant creditors, even when a large majority

agreed. As a consequence voluntary liquidation led to the disappearance of companies, often via the use of ordinary insolvency.

In 1942 Italian lawmakers for the first time provided a procedure (amministrazione controllata) explicitly conceived to address the problem of insolvent yet viable businesses. Data shows that this new tool made little impact in general, although it proved to be relatively more popular among joint-stock companies. Amministrazione controllata addressed the issue of mismanagement in big businesses (indeed an important part of the problem), but it was no solution for the plethora of relatively smaller companies that constituted the large majority of cases of corporate insolvency. The key issue of locking-in creditors in the process of firm's restart was not addressed either.

References

Amatori, F., 'Italy: the tormented rise of organisational capabilities between government and families', in A.D. Chandler, F. Amatori and T. Hikino, eds., *Big business and the wealth of nations* (Cambridge, Mass., 1997), pp. 246-76.

Amatori, F. and Brioschi F., 'Le grandi imprese private: famiglie e coalizioni', in F. Barca, ed., *Storia del capitalismo italiano dal dopoguerra a oggi* (Rome, 1997), pp. 118-153.

Bonsignori, A., *Il Fallimento* (Padua, 1986).

Brioschi, F., Buzzacchi L., and Colombo M. G, *Gruppi di imprese e mercato finanziario. La struttura di potere nell'industria italiana* (Rome, 1990).

Chandler, A. D., *Strategy and Structure: Chapters in the History of the American Industrial Enterprise* (Cambridge Mass., 1962).

Chandler, A. D., *The visible hand: the managerial revolution in American business* (Cambridge, Mass., 1977).

Chandler, A. D., 'Organizational capabilities and the economic history of the industrial enterprise', *Journal of Economic Perspective* 6 (1992), pp. 79-100.

Ciocca, P., 'Law and the economy in modern Italy', *Rivista di Storia Economica*, XIX (2003), pp. 205-10.

Coase, R., 'The nature of the firm', *Economica*, 4 (1937), pp. 386-405.

Cohen, J. and. Federico G, *The Development of Italian Economy, 1820-1960* (Cambridge, 2001).

Conti, G. and La Francesca S., eds., *Banche e reti di banche nell'Italia postunitaria* (Bologna, 2000).

Di Martino, P., 'Banking crises and the evolution of bankruptcy legislation in Italy (c. 1890-1939)', *Rivista di Storia Economica*, XX (2004), pp. 65-85.

Di Martino, P., 'Approaching Disaster: A Comparison between Personal Bankruptcy Legislation in Italy and England (c.1880-1939)', *Business History*, 47 (2005), pp. 23-43.

Falchero, A. M., *La Banca italiana di sconto 1914-1921. Sette anni di guerra* (Milan, 1990).

Federico, G., 'Industrial structure (1911-2001)', in R. Giannetti and M. Vasta, eds., *Evolution of Italian enterprises in the 20th Century* (Heidelberg and New, York 2006), pp. 15-47.

Federico, G. and Toninelli, P.A., 'Business strategies from Unification up to the 1970s', in R. Giannetti and M. Vasta, eds., *Evolution of Italian enterprises in the 20th Century* (Heidelberg and New, York 2006), pp. 191-238.

Giannetti, R. and Vasta M., 'The Historiography', in R. Giannetti and M. Vasta, eds., *Evolution of Italian enterprises in the 20th Century* (Heidelberg and New York, 2006), pp. 1-14.

Giannetti, R. and Vasta M., 'Conclusions', in R. Giannetti and M. Vasta, eds., *Evolution of Italian enterprises in the 20th Century* (Heidelberg and New York, 2006), pp. 265-68.

Giannetti, R. and Velucchi, M., 'The demography of manufacturing firms (1911-1971)', in R. Giannetti and M. Vasta, eds., *Evolution of Italian enterprises in the 20th Century* (Heidelberg and New York, 2006), pp. 63-86.

Gore-Browne, F., *Handbook on the formation, management and winding up of joint stock companies* (London, 1925).

Hatzichronoglou, T., *Revision of the high-technology sector and product classification* (Paris, 1997).

Levine, R., 'Law, finance and economic growth', *Journal of Financial Intermediation*, 8 (1999), pp. 8-35.

Morck R., D. Wolfenzon, and B. Yeung, 'Corporate Governance, Economic Entrenchment, and Growth', *Journal of Economic Literature*, 43 (2005), pp 655-720.

Pavitt, K., 'Sectoral Patterns of Technical Change: Towards a Taxonomy and a Theory', *Research Policy*, 13 (1984), pp. 323-73.

Sraffa, P., 'The bank crisis in Italy', *Economic Journal*, 32 (1922), pp. 178-97.

Teti, R., 'Imprese, imprenditori e diritto', in F. Amatori, D. Bigazzi, R. Giannetti and L. Segreto, eds., *Storia d'Italia. Annali 15, L'industria* (Turin, 1999), pp. 1215-1303.

Tufano, P., 'Business Failure, Judicial Intervention, and Financial Innovation: Restructuring U.S. Railroads in the Nineteenth Century', *Business History Review*, 71 (1997), pp. 1-40.

Williamson, O. E. *The economic institutions of capitalism* (New York, 1985).

Zamagni, V., *The economic history of Italy, 1860-1990* (Oxford, 1993).

Official Publications

Associazione fra le società per azioni, *Bollettino Ufficiale delle Società per Azioni* (Rome, 1924)

Istat, *Annuario delle statistiche giudiziarie* (Rome, various years)

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[2] Coase, 'The nature of the firm'.

[3] Chandler, 'Organizational capabilities', and Williamson, *The economic institutions.*

[4] Chandler, *Strategy and structure* and *The visible hand* .

[5] Federico, 'Industrial structure', and Giannetti and Velucchi, 'The demography'.

[6] See Brioschi, Buzzacchi and Colombo, *Gruppi di imprese*, and Amatori and Brioschi, 'Le grandi imprese private'.

[7] Amatori, 'Italy: the tormented rise'.

[8] Federico and Toninelli, 'Business strategies', and Giannetti and Vasta, 'Conclusions'

[9] For a general overview of the development of the Italian economy, see Zamagni, *The economic history* and, Cohen and Federico, *The Development*. For up-to-date survey of the more specific topic of industrial organisation, see Giannetti and Vasta, 'The Historiography'.

[10] Relevant exceptions are Ciocca, 'Law and the economy' and Teti, 'Imprese e imprenditori'.

[11] Chandler, *The visible hand.*

[12] Among others, Levine, 'Law, finance and economic growth'. For an up-to-date survey, Morck, Wolfenzon and Yeung, *Corporate Governance.*

[13] In the Anglo-Saxon legal jargon different names are used to indicate personal cases (bankruptcy) or companies (insolvency). This linguistic difference does not exist in Continental Europe, and in Italy the word fallimento (bankruptcy) applies to both cases. In this paper we adopt the Continental European jargon and use the two words insolvency and bankruptcy as synonyms.

[14] Insurance companies and banks have not been included in the sample as they benefited from a different legislation. See Di Martino, 'Banking crises'.

[15] The curatore fallimentare was the person in charge of managing bankruptcy procedures.

[16] See Di Martino, 'Approaching disasters'.

[17] Legge 24 maggio 1903 n. 197.

[18] The 1883 English law, for example, had set this level at twenty-five per cent. Di Martino, 'Approaching disasters'. In Italy the same threshold became the rule as a result of the law 10 July 1930 n. 995.

[19] In England , for example, it became legal in 1911. Bonsignori, *Il fallimento,* pp. 29-30.

[20] For example the mechanism called 'upset price' invented by American courts to get reluctant creditors involved in the re-launch of insolvent railways companies. For details see Tufano, 'Business Failure'.

[21] R.D.L. 16/03, n. 267. The same law also extended the use of the so-called liquidazione coatta amministrativa, originally conceived for banks, to all kind of business. Liquidazione coatta amministrativa, however, was not an instrument to guarantee firms' survival and simply implied that official bodies, instead of creditors agents, were in charge of assets liquidation.

[22] Bonsignori, *Il Fallimento*.

[23] The 1890 English Company wind-up law (53 & 54 Vict., c.63 1890), for example, allowed three kinds of liquidation: voluntary, compulsory, and supervised and the former was de facto allowed only to solvent companies. Insolvent companies could file for voluntary liquidation but creditors had the power to appeal to the court to have voluntary liquidation turned into court-supervised procedure. Gore-Browne, *Handbook on the formation.*

[24] The so-called 'company restructuring', which implied the creation of a new business run by a new management, or simpler court-sanctioned agreements with creditors without eliminating the old company, were automatically linked to voluntary liquidation. Also, recalcitrant creditors had only one week to refuse the deal, while in the case of agreement a majority of three quarters of creditors was enough to approve the plan. Gore-Browne, *Handbook on the formation*.

[25] This norm was sanctioned by clause 146 of the 1882 commercial code and it was only slightly modified by the subsequent 1942 civil code.

[26] An hypothesis confirmed by the analysis of insolvency in Milan (see section V).

[27] Società regolari is a non-homogenous category including: general partnerships, limited partnerships, limited partnerships with share capital, co-operatives, and mutual insurance companies.

[28] In 3 cases of concordato fallimentare the companies involved paid more than forty per cent of debts, while 3 other firms *(*Società Anonima Consorzio Italiano metalli e affini*;* Este*;* Explorator*)* simply passed through fallimento but managed to re-pay the whole amount. Source: ACCM/If.

[29] As in the case of the Società Anonima Consorzio Farmaceutico Italiano. Source: ACCM/If, company Società Anonima Consorzio Farmaceutico Italiano.

[30] In the case of the Società Anonima Circes, the annual report suggested that in the attempt of filing for concordato preventivo the company had 'encountered many difficulties, essentially of procedural nature.' ('Incontrate molte difficoltà essenzialmente di ordine procedurale', our translation). Source: BUSA, 1924.

[31] The commissario giudiziale in charge of the case of the company Cartiera Albano Franchini explicitly acknowledged the problem in his official report. Source: ACCM/If, company Cartiera Albano Franchini

[32] Source: ACCM/If, company Fonderia di Desio.

[33] In order to classify a sector as innovative or traditional, we have adapted to our case, by using qualitative criteria, the two main classifications on technological intensity (Pavitt, 'Sectoral Patterns'; Hatzichronoglou, *Revision*). Notwithstanding the length of the time span studied we decided to use the same classification for the entire period since it is not characterized by radical technological discontinuities.

In a few special cases we also consider whether or not specific companies fitted the idea of Schumpeterian innovative entrepreneurship. Among innovative companies we therefore include the firms Bacapa and Federazione Casearia Italiana (companies operating in the traditional sectors such as textile or food and drink but using machinery incorporating owned patented innovations), the firm Pentola 'Aster' (which produced a patented new product). Conversely, the company Società Anonima Brevetti e Novità (Saben) has been considered as a traditional company. This firm, although formally engaged with the commercialisation of newly patented goods, was in fact a trader of low-value traditional goods.

[34] Source: ACCM/If, company Giglio.

[35] Source: ACCM/If, company Società Anonima Combustibili.

[36] The crash of the *Banca Italiana di Sconto* was one of the deepest and most serious banking crises in Italian history. See, Sraffa, 'The bank crisis in Italy', and for Italian-speakers Falchero, La Banca italiana di sconto.

[37] The other available case (the Cartiera Albano Franchini) supports this evidence, even if in this instance the court expressed a favourable opinion. Source: ACCM/If, *company De Capitani & F.lli* and company Cartiera Albano Franchini

[38] It must be taken into account that state-owned companies also benefited from bail-out operations. For the banking sector this was more the rule than the exception. See Di Martino, 'Banking crises'.

[39] For example the company Magazzini 33 and the firm Società Industrie Meccaniche Servadei Benetti which succeeded in its attempt to avoid liquidation. Sources: ACCM/If, company Magazzini 33, and ACCM/Ad, Società Industrie Meccaniche Servadei Benetti.

[40] Among companies for which detailed information is available, sixteen complained about problems of this kind. Source: BUSA, 1924.

[41] For a survey on the functioning of the Italian credit system see Conti and La Francesca, *Banche e reti*.

[42] Source: BUSA, 1924.

[43] In the cases of the companies Bacapa and Società Anonima Cooperativa 'La Casa' the level of assets exceeded the amount of liabilities, while in the example of the firm Industria Dattilografica the bankruptcy was caused by the action of one single creditor. Source: ACCM/If, companies Bacapa, Società Anonima Cooperativa 'La Casa', and Industria Dattilografica.

[44] Source: ACCM/If, company Federazione Casearia Italiana.

[45] As in the cases of the company *Industrie Riunite Arti Grafiche* or the firm *Italo Francese Forniture Articoli Carrozzeria*. Source: ACCM/If, company Industrie Riunite Arti Grafiche, and company Italo Francese Forniture Articoli Carrozzeria.

[46] Source: ACCM/Fi, company La Commissionaria.

[47] The Fabbrica Italiana Articoli Reclame had enough financial resources to invest massively and to turn its initially inefficient productive structure into a modern and potentially-successful plant. Ironically, it was at that stage that the company failed to attract new capital and got bankrupted. The Società anonima Italiana Motori Salmson, despite offering relatively popular goods, failed to attract further financial resources in a phase when more capital was required to survive a structural crisis. Source: ACCM/If, company Fabbrica Italiana Articoli Reclame, and Società anonima Italiana Motori Salmson.

[48] Source: ACCM/If, company Edizioni Pervinca.