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The economics of the EU's corporate-insolvency law and the quest for harmonisation by market forces†

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Abstract

In 2002, a new legislation that harmonises insolvency laws within the EU came into effect. I find reasons – both theoretical and empirical – to doubt whether the new law has achieved the goal of decreasing the cost of cross-border insolvency and borrowing. I thus suggest an alternative approach to the problem, which is based – to a larger extent – on market forces rather than on political or bureaucratic initiative.

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"The European Parliament and the Council of Ministers shall endeavour to achieve the objective of free movement of capital between Member States and third countries to the greatest extent possible."
Constitution for Europe (*draft*, 2003, Article III-46).

"These objectives cannot be achieved to a sufficient degree at national level and action at Community level is therefore justified."
Council regulation on insolvency proceedings (1346/2000).

1. Introduction

Two propositions are often taken for granted while discussing the regulation of cross-border transactions. First, that any harmonisation is for the better. For without rules that reconcile conflicting laws, international transactions lack structure and discipline. Moreover, in a world where international trade is both commendable and unstoppable, even a domestic transaction may become international at some stage, either by coincidence or as a deliberate attempt to avoid domestic regulation. As a result, international disorganisation might bite into an otherwise well-functioning domestic order. The second proposition is that harmonisation can only be achieved through political or bureaucratic initiative. In this paper I examine theses propositions within the context of the 2000-EU insolvency law and find reasons – theoretical and empirical – to doubt both; indeed, my statistical analysis is consistent with the hypothesis that the legislation has actually increased the cost of cross-border insolvency. I therefore conclude the paper suggesting an alternative approach to harmonisation, which is based – to a much larger extent – on market forces rather than on political action.

Any analysis of harmonisation requires some understanding of the "spontaneous order" that prevails in its absence. Based on a study of a shipping insolvency case where jurisdiction was disputed between English and American courts, I stipulate that the basic problem with the un-harmonised state is a heightened degree of legal uncertainty, resulting from the poor articulation of the rules that determine to what jurisdiction each case belongs. In such a setting each party tries to push the case to her favourite jurisdiction. Worse, there is a certain first-mover

advantage in this interaction, where the first party to litigate increases the likelihood of achieving his preferred jurisdiction. That creates a phenomenon similar to a creditors' run, leading to excessive litigation and premature liquidation. It is noteworthy, however, that although such a setting is probably sub-optimal, it is by no means lacking order alltogether: even if the outcome follows no expressed legal doctrine, and even if the players' unilateral actions have a greater effect on the outcome than deemed desirable, we may still think of that outcome as an equilibrium in a well-defined game. The question that needs to be explored is whether the rules in this game can be changed to the benefit of the parties involved.

Putting the problem in that way one is forced to admit that harmonisation may actually worsen the situation relative to the spontaneous order. It is not even clear that harmonisation per se decreases the level of legal uncertainty. It is actually possible that the outcome in the spontaneous-order game is fairly predictable, while the harmonisation rules are too vague, or maybe leave too much room for judicial discretion, making the final outcome even harder to predict in advance. That might actually increase the incidence of premature liquidation and the cost of bankruptcy. Looking at a court case of a Parmalat subsidiary – already adjudicated under the new EU legislation – one may conclude that this is indeed a possibility that deserves a careful consideration.

Whether legal uncertainty (and the cost of insolvency) has actually increased, and whether this has affected a substantial fraction of firms is thus an empirical question. To answer it, I merge accounting, shareholding and subsidiary information, provided by Amadeus, a database that covers German, Spanish, French, British and Italian companies beyond a certain size threshold. One can then classify companies as being likely to be affected by the new legislation if there is a significant ownership by a non-domestic-EU industrial shareholder, or if the company has a significant ownership of non-domestic-EU subsidiaries.

There are two main findings. First, cross-border ownership is an important, though not overwhelming phenomenon. Around 6% of companies have a non-domestic EU industrial shareholder, while the incidence of a non-EU shareholder is at least double that much. About 40% of companies have subsidiaries, about 5-6 (on

average) each, of which about 10% are non-domestic EU, and about the same amount located out of the EU.[1]

Second, there is some evidence that companies with such cross-border ownership have seen an increase in their cost of borrowing during 2001-2003 (when the law became effective). Since I have no direct information about the cost of borrowing, I use the level of gearing (leverage) as an indicator. Under well-established theory, companies that face increased bankruptcy costs (e.g. due to enhanced co-ordination problems in bankruptcy) would see their effective cost of borrowing increase and respond by decreasing their gearing. Controlling for company characteristics, including the effect of having local industrial holders or subsidiaries, industry, the business cycle etc., I estimate the marginal, accumulated change in gearing for companies with such EU ownership. It turns out that German, Spanish and British companies with a non-domestic EU industrial holder have significantly decreased their level of gearing by 15% to 40% over the 2001-2003. Similar effects were found for non-EU industrial holders. Hardly any effect was detected for companies with non-domestic EU subsidiaries.

Hence, there is a reason to doubt whether the new legislation has achieved its goals. I thus suggest an alternative approach: that each (corporate) contract should specify a jurisdiction under which legal disputes are to be resolved. Since insolvency is just a standardised form for the default clauses of the debt contract, the settlement of a debt contract in default is subject to the same rule. I do recognise that some jurisdictions are inconsistent with others, but argue that individual firms should be responsible for avoiding such conflicts, by placing their contracts under jurisdictions consistent one with the other. Note that companies are likely to bear a significant extra cost of litigation in case their contracts are mutually inconsistent, and thus have an incentive to invest effort in finding a satisfactory solution to the problem. Note also that companies are allowed to choose the solution of placing all their contracts under a single jurisdiction. That may be their domestic jurisdiction, or a foreign one, so that companies can benefit from a larger set of contractual menus and enhanced legal diversity.

It is also noteworthy that the proposal above does not insist on – though it allows – putting all the assets of the company under a single insolvency jurisdiction.

[1] See Scott and Smith (1986) for a similar analysis regarding the effect of the 1978 Bankruptcy reform

Thus, for example, a company that has assets in several countries may borrow from local banks and place each contract under domestic jurisdiction; in case of insolvency each contract would fall into a separate procedure. This arrangement, which seems to prevail anyway under the spontaneous order, cannot be dismissed up-front on grounds of inefficiency. For if the objective of legislation is to minimise the cost of insolvency, then either (in case of a unified insolvency procedure) the creditors migrate to settle disputes where the company files, or (in case of a split jurisdiction) the company migrates to settle disputes where the banks operate. Since it is not a priori clear which arrangement is more cost efficient, it makes sense to leave the decision in the hands of market participants.

The paper is organised as follows: Section 2 explores the state of spontaneous order, Section 3 describes the new EU legislation, Section 4 analyses the data, Section 5 provides the alternative proposal and Section 6 concludes.

2. Spontaneous order

To understand harmonisation one needs to grasp what happens in its absence. In the next sub-section I describe this spontaneous order drawing heavily on a specific Anglo-American shipping case. I use this non-EU case because it is an extreme one: ships have no geographical characteristics and thus do not fall "naturally" into a certain jurisdiction; also, England and the US do not belong to any political union and thus better exemplify the state of spontaneous order.[2] I conclude this section with a brief description of the pre-harmonisation diversity in European insolvency laws.

A few words aught to be said at this point regarding the conventional hard/soft taxonomy of insolvency systems, harder meaning that default is more likely to lead to liquidation. It was argued elsewhere that this is an oversimplification, since one has to distinguish between hard contracts and hard laws; see Franks and Sussman (2005). A contract may be deemed hard if it gives some creditors default-contingent liquidation rights. A law may be deemed hard if it strictly enforces the contractual rights of the creditors – whether hard or soft. In that respect, English insolvency law is hard (though somewhat softened by recent legislation); in a sense, corporate insolvency law is just the practical wisdom accumulated along many years of contract enforcement. (That creditors in England typically hold hard contracts is then a mere

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in the US on the terms of credit.

description of the equilibrium outcome in the debt market.) In contrast, the American and the Continental approach is to put the creditors' contractual rights – particularly the secured creditors' liquidation rights – under judicial discretion. Often, the court would assist the company's restructuring efforts by granting it "protection" from its creditors' who attempt to seize its assets. (That contracts are softened by such a "stay" is thus an ex-ante restriction on the set of permissible contracts). In other words, English law follows a freedom of contracting policy, while American law adheres to a policy of judicial activism.

2.1. Spontaneous order: how does it work in practice?

In absence of harmonisation a legal order is established "spontaneously" by the unilateral moves of the contracting parties, the legislators and the courts. Legislators commonly grant their courts the broadest-possible powers over insolvency. Hence, Section 109(a) of the US bankruptcy code states that "only a person that resides or has domicile, a place of business, or property in the United States … may be debtor under this title". The debtor need not be a US citizen (or – in the case of a company, incorporated in the US), operate within the US, nor should its US-assets be of a significant magnitude.[3] Indeed, the case of Theresa McTague[4] created the precedent that a bank account with $194 is sufficient to satisfy the requirement of having "property-in the United States". The case involved a US-citizen, permanently residing in Canada who defaulted on some $17,000 credit-card debt in the US. After moving most of her money across the border, she petitioned for a Chapter-7 discharge so that she could "visit the United States in the future without fear of seizure of her automobile". The court recognized that the $194-deposit was left behind "for the very purpose of creating a jurisdiction here". The trustee tried to dismiss the discharge petition on grounds that the deposit was insignificant and that the debtor behaved opportunistically. It failed, as the court was reluctant to place any restriction on its own power of adjudication. Similarly, English law allows the court to wind-up a

[2] There are many international conventions that are supposed to impose order, but they play a limited role in adjudicating the cases; see Bowtle and McGuinness (2001).
[3] Yukos – a Russian Oil company caught in a power struggle with the Kremlin – is a famous recent case where a company with no substantial US activity managed to file for US bankruptcy; see "Method and Madness", *The Economist*, December 29, 2004.
[4] In re Theresa McTague, Debtor, 198 B.R. 428. July 15, 1996.

foreign company; it is sufficient that the company has assets in the UK, and that the law "is exercisable" on at least one concerned party.[5]

To see how legal disputes are resolved in such a world, consider the case of Cenargo[6] a shipping company "with main office in England; the parent company and most of its subsidiaries are organized under English law". (It is common practice in shipping to organize a business as a holding company with each vessel owned by separate subsidiary, so that every vessel is a separate debtor.) The debtors "conduct their business primarily in England, Ireland and elsewhere in Europe and adjacent waters. None of the Cenargo debtors conduct business in the United States. No Cenargo vessels sail to the United States".

Nevertheless, Cenargo issued in the US some $175 million of "high yield" debt, which was governed by U.S. law. Although the "indenture trustee" – Deutche Bank – held a lien on "at least one of Cenargo's operating subsidiaries", the high-yield notes were "believed to be under secured". At the same time, Cenargo had two other over secured creditors: Lombard, a leasing company and a subsidiary of the Royal Bank of Scotland, and the Bank of Nova Scotia with a £17.8 million of debt outstanding. By the fall of 2002 Cenargo was in financial distress and aimed to swap the high-yield debt to equity. Towards this end, "the Cenargo debtors also opened joint bank accounts in the United States, providing further support for filing under the Bankruptcy Code".

On 14 January 2003, under pressure from the American bondholders, Cenargo filed for Chapter 11. As a result of the automatic stay imposed by the filing, any action, by any creditor, to collect debt from Cenargo – within the US or out of the country – could be deemed contempt of the American court. Nevertheless, on 28 January 2003 Lombard "requested the commencement of English provisional liquidation ... without requesting relief from the automatic stay in this [American] court". Lombard also obtained an anti-suit injunction from the English court, disallowing Cenargo's directors to take "any steps in the Chapter 11 proceedings ... without the prior consent of this [English] court. ... The directors are resident within the United Kingdom and subject to the jurisdiction of the English court. If they breach the term of the injunction, they lay themselves open to contempt proceedings before the English court".

[5] See Bowtle and McGuinness (2001), pp. 234-235.

On 5 February 2003 – after much haggling – Lombard, the American bondholders and Cenargo have all agreed to move the case to England (and also to switch the English process from Liquidation to Administration – a reorganization procedure), and obtained permission from the American court to do so. "Ironically, given the amount of time and money spent on jurisdictional issues ... the Joint Administrators do not expect to depart materially from this [American] restructuring approach". Chapter-11 proceedings were suspended on 14 February 14 2003.

The issue of contempt was resolved when the English court sent the American court a Letter of Request with assurances that Lombard's motion "was lawful and proper under English law" and suggested that no party – neither English nor American – will be held in contempt of court. The American court – though critical of Lombard's acting "precipitously and unilaterally" – agreed "under the peculiar facts of these cases, that no party would be unduly penalized for violating the conflicting injunctions" of the English and the American courts.

2.2 Spontaneous order: analysis

On the face of it, spontaneous order does not seem to be an optimal arrangement. Yet, its social costs, and possibly some of its benefits, seem to deserve a more careful analysis. Three aspects, particularly, call attention: the heightened level of legal uncertainty, the greater diversity of legal forms and the possibility that the assets of an insolvent company are split across several jurisdictions.

2.2.1 Legal uncertainty

It is evident that there is some "legal uncertainty" in non-harmonised cross-border insolvencies; in absence of precise rules to determine jurisdiction, each party files within the jurisdiction that suites her best. Then, complex negotiations between the parties and the courts commence, of which the final outcome is hard to predict.

It is not clear, however, that legal uncertainty per se is economically inefficient because, according to the Coase Theorem, the parties can avoid the uncertainty altogether by an out-of-court settlement. Moreover, by settling out of court the parties would save the legal expenses, which can then be distributed to their own benefit. Hence, a settlement buys the parties free (or, actually, negative premium)

[6] In re CENARGO INTERNATIONAL, PLC et al., Debtors, 294 B.R. 571, June 27, 2003.

insurance. If the bargaining process is ex-post efficient, then the parties should be able to strike such a deal with no difficulty.

Similarly, the *dilution* of payments and incentives as a result of legal uncertainty – e.g. when a hard contract is affected by the prospect of a soft adjudication – can be mitigated by adjusting the contract ex-ante in order to compensate for the possible dilution later on. This mechanism works even better if an out-of-courts settlement is easy to strike. Consider, for example, the case where an English debtor uses the threat of Chapter 11 in order to renegotiate (ex post) a certain write-down. Moreover, the debtor foresees the write-down and decreases ex ante the effort she puts in avoiding distress. But then, the creditor also foresees the write-down and adjusts the initial repayment (upwards) so as to restore the expected return and the effort incentive to the level aimed-for without the legal uncertainty. There are some theoretical examples where the dilution effect can be completely eliminating by a proper adjustment of the debt contract; see Franks and Sussman (2005). Although these results are not generic, it is still safe to conclude that the mechanism can at least mitigate the negative dilution effect.

One has to recognise, however, that these Coasian arguments have their limit. For if they held universally, all disputes would be resolved out of court and litigation would remain "off the equilibrium path". Several factors may explain why this does not happen, but the one that seems to be most relevant to the current analysis is that the parties seem to gain a certain advantage by moving first. The Cenargo case may serve as an illustration; the bondholders – being under-secured – probably felt that they could negotiate more favourable terms for the debt-equity swap in Chapter 11. Then, Lombard appealed for a Liquidation Order with a sole purpose of moving the case from the US back to England. As we have seen, Lombard – being over-secured – could afford to wait longer, and was indeed willing to switch from Liquidation to Administration once English jurisdiction was secured. With hindsight, it was probably a mistake on Lombard's part not to litigate pre-emptively in England, which could save it the trouble of facing contempt charges in the US.

A possible equilibrium in such a game is a "run for the exit" where each party litigates just in order to prevent the other from gaining the first-mover advantage. Two types of economic inefficiencies emerge. The first is premature liquidation, where a company is liquidated due to a creditors' run rather than because its time has come (note again that Lombard was actually willing to wait further). The second is an

increase in the direct cost of litigation: not only that the incentive to settle out of court is weaker the race might end with a duplication of legal proceedings (as has happened with Cenargo).

Note that though the lack of harmonisation clearly results in loss of economic efficiency, some rules still emerge under spontaneous order, which impose a certain structure on the non-cooperative litigation game. Going back to the Cenargo case, the US court must have realised that since the company's secured assets were out of its own national territory, it had little power to enforce the stay. The only thing it could do is to hold Lombard in contempt, which – by Lombard's revealed action – had a limited effect. At the same time the US court must have realised that the English court would not allow an English company to breach a contract with a UK lender, particularly is the assets involved are within its reach (either in the UK or elsewhere in Europe). Although the English and the American courts have put some effort in resolving their dispute, politely, the outcome also reflects the hard facts on the ground: courts will maintain jurisdiction on assets within their territory, particularly if legal rights of their own citizens may be breached.

2.2.2 Diversity of legal forms

By itself, diversity of legal forms adds no economic value. One may conceive a situation where insolvency cases are allocated into different jurisdictions – either through an explicit rule or as a result of uncoordinated interaction – in an arbitrary manner. Two conditions need to be satisfied if diversity is to make a difference. First, different jurisdictions should have some real effect on companies' value, even after all the Coasian adjustments have already been executed. Second, cases should be allocated to the jurisdiction that maximizes their value. The most natural way to achieve such an allocation is by allowing companies to choose jurisdiction ex ante.

Hence, it is fair to say that the spontaneous order does not realise its full potential in terms of enabling choice of legal form. This is because too much weight is given ex post to the physical location of the assets, which in the case of ships may be entirely coincidental. Yet, limited choice is better than no choice. Moreover, even in the current state of affairs, the parties have some effect on the choice of jurisdiction, particularly in England where the law does recognize the principle of freedom of contracting. Hence, had Cenargo indicated in the debt contract it has signed with Lombard that disputes should be adjudicated in the US the English courts would take

such an expression into consideration. Any other American connection, such as listing or creditors in the US would affect the court's decision as well.

It is worth mentioning here that the academic debate regarding the optimal insolvency regime – US or English type – has not converged to any consensus. In such a situation it is probably best to leave the decision to market participants. At least for international companies, the spontaneous order provides a modest amount of that choice.

2.2.3 The possibility of asset split across jurisdiction

If – under spontaneous order – the physical location of assets has a great effect on the jurisdiction, then it is possible that assets of the same company would be subject to separate insolvency procedures, each in a different jurisdiction.

It is worth pointing out that such an asset split is not necessarily inefficient. Consider the case where distress is fairly independent of the incentives provided by insolvency law. In that case, the company's main objective is to minimise expected bankruptcy costs. More precisely, the question is whether – for a company that has assets both at home and abroad – placing all of them under a single jurisdiction necessarily decrease bankruptcy costs (relative to splitting jurisdiction). Note that if foreign creditors fund the foreign assets, then one of the parties would have to step out of her domestic jurisdiction. Whether it is more cost efficient for the creditors to settle where the company is domiciled or vice versa is an empirical question.

Note also that in the argument above one has to include all sorts of stakeholders – particularly workers – among the company's creditors. Suppose, for example that a company tries to bring foreign assets under domestic jurisdiction. However, the company also has foreign workers who are employed in proximity to the assets abroad. Their contracts fall under foreign employments laws and adjudicated by foreign courts. Possibly, resolving conflicts between foreign employment laws and domestic insolvency laws is a costly business. Hence, it might be cost effective to avoid these conflicts altogether by placing the assets under foreign insolvency law. That may also be compatible with funding the investment by foreign banks, which might have a cost advantage over domestic banks in monitoring the assets.

2.3 Diversity of insolvency laws within the EU

It is obviously the case that harmonisation matters only when the insolvency laws differ in the way they treat the debt contract. It is thus worth discussing, briefly, the cross-EU differences in insolvency law.

Davydenko and Franks (2004) provide an exhaustive comparative study of corporate bankruptcy in Europe. They start by ranking the laws of three major countries according to the courts' power to block creditors' contractual rights. While the UK strictly enforces the debt contract, France's 1985 Bankruptcy Code explicitly states the rescue of the company as its top objective. For that purpose, the court is empowered to place a stay of unlimited duration on the company's debt. Germany comes in between France and the UK in terms of its commitment to the enforcement of creditors' contractual rights.

The main focus, however, of Davydenko and Franks (2004) is the comparison of the actual performance of the different laws. They collect data on 2280 small firms (turnover below €75 million) in financial distress, and follow them for a period of time until distress is resolved in either turnaround or liquidation. One of the main findings is that debtors and creditors already internalise their insolvency regime and ex-ante adjust capital structure accordingly. Most significantly, French banks cover their lending by a higher collateral relative to UK banks, so as to protect themselves against the dilution of the liquidation rights by the courts (125% against 85% mean coverage, respectively). Another indicator that points in the same direction is the average current ratio (current assets over current liabilities), which is 1.35 in France against 1.05 in the UK. Possibly, French banks classify clients as distressed at an earlier stage, so that given the slower pace of French proceedings they would still have time to deal with the distressed company. Somewhat surprisingly, interest-rate spreads and leverage do not differ significantly across countries.

Insert Table 1 here

Indeed, proceedings are longer in France; median length is 1.81 years against 0.78 years in the UK. At the same time, the average recovery rate on French collateral is only 35% against 83% in the UK. However, since French loans tend to be better covered by securities, the difference in average recovery rate on loans is smaller 54% in France against 74% in the UK. Nevertheless, the French system does not seem

to achieve one of its main goals, which is to decrease liquidation rates. 62% of distressed French companies end in piecemeal liquidation, against 43% in the UK.

Hence, it seems French insolvency law offered a better deal to a debtor in default relative to England. Yet, until the 2000-harmonisation law there were many gaps in the rules that determine jurisdiction. Lombardo (2001) provides the following peculiar example. English legal theory, under freedom of contracting, states that a company is governed by the law under which it is incorporated. Many continental countries adhere to the "real seat" doctrine, by which a company is governed by the corporate law of the country where its head-office is located. Hence, both English and German law rule that an English-registered company with a head-office in Germany falls under their own jurisdiction. At the same time, both laws should rule that a company registered in Germany with a head-office in the UK does not fall under any jurisdiction. It is unclear, however, whether courts would be impressed with such legal theory, or would rather follow the spontaneous order described above, exercising their powers over assets within their jurisdiction.

3. European Legislation

In May 2000, after many years of haggling, the EU finally came up with its own harmonisation law; see Omar (2003) for a comprehensive history of the process. One of the main dilemmas facing the legislator was that of harmonisation versus convergence, the former being a set of rules that determine which case falls under what jurisdiction, the latter being a single insolvency law for all EU companies. The former approach was adopted eventually. We turn next to a more detailed description of the new legislation.

3.1 Insolvency legislation of 2000

The main points in Regulation 1346/2000 (dating 29 of May, 2000 – entering into force on the 31 of May 2002) are[7]:

- Bankruptcy is governed by the "real seat" doctrine, namely the laws of the member state "where the debtor has the centre of his main interest", i.e. the "place where the debtor conducts the administration of his interests on a regular basis". In absence of proof to the contrary, it is presumed that this is simply the location of the company's registered office.

[7] See Rajak (2004) and Wessels (2004) for a juridical analysis of the new legislation.

- Bankruptcy would not affect "rights in rem[8] of creditors", namely rights in assets that creditors hold as a security. The law recognizes explicitly "collections of indefinite assets as a whole which change from time to time", i.e. floating charges (see article 5). It is explicitly recognised that contractual rights in land, a "ship or an aircraft" are all governed by the laws of the member state where the object is located or registered. Likewise, employees' rights are subject to the laws of the member state where the employment takes place.
- Any party, including the liquidator in the primary proceedings, may initiate "secondary insolvency proceedings" in another member state "where the debtor has an establishment" with power over assets situated within the territory of the other member state. The secondary-proceeding court "*shall* stay the process of liquidation in whole or in part on receipt of a request from the liquidator in the main proceedings" (my emphasis). The liquidator of the secondary proceeding may ask the liquidator in the main proceedings "to take any suitable measure to guarantee the interests of the creditors in the secondary proceedings. ... [However], such a request from the liquidator may be rejected only if it is manifestly of no interest to the creditors in the main proceedings".
- Judgments in one member state are recognised by others. However, "any Member State may refuse to recognise insolvency proceedings in another Member State or to enforce judgement handed down in the context of such proceedings where the effect of such recognition or enforcement would be manifestly contrary to that State's public policy…" (see article 26).

3.2 The effect of legislation

[8] Namely, "the thing itself", primarily rights in assets to secure debt repayment.

Two characteristics of the new law deserve special attention. First, the law does not facilitate choice of legal form. Rather, the law adopts the "real seat" doctrine, which imposes on a company the jurisdiction of its "centre of main interest" location. I shall defer an elaborate discussion of this characteristic to Section 5 above. Second, the law is highly discretionary. Some of its key concepts are defined in general terms, leaving much room to judicial discretion on the interpretation of concepts such as "main interest" "matters of public policy". Probably, judicial discretion will be in great demand where the law is committed to conflicting principles that need to be balanced off, one against the other. Thus, for example, the law protects creditors' rights in rem, but also Member States' right to exercise their own laws, particularly on matters of public policy. As argued above, a few countries empowered their courts to place a stay on the company's debts, in violation of the creditors' rights in rem, due to a public policy that tries to preserve the corporate entity. That might have increased the amount legal uncertainty in the system.

To illustrate this point, consider the case of Eurofood, a wholly owned subsidiary of the Italian food giant Parmalat (€7.5 billion turnover 2002), which went bust in 2003 amid a huge financial scandal.[9] Eurofood was incorporated in Ireland and had a registered office in Dublin's International Financial Services Centre (IFSC), a structure that had certain tax advantages. Its only business was to arrange finance to companies in the Parmalat group (e.g. Brazil or Venezuela), and it conducted most of its business with the Dublin branch of Bank of America. There were no Irish employees. The company had four directors, two Italians – Parmalat employees based in Italy – who were the de-facto managing directors of the company, and two Irish, one of whom was an employee of Bank of America. There were no allegations of wrongdoings by Eurofood.

Both Italian and Irish courts ruled that Eurofood fell under their own jurisdiction. The main argument on the Italian side was that the "effective seat of Eurofood was in Parma in Italy where its executive directives were based and where all significant decisions were taken. ... Parmalat SA was the real entity behind the formal arrangement of a separate entity"; moreover, it was claimed that the Italian directors participated in most board meetings by phone from Italy.

[9] See "In the matter of Eurofoods IFSC Limited" [2005] I.L.Pr. 2. and I.L.Pr. 3 for the Irish proceedings and "Re The Insolvency of Eurofood IFSC Limited" I.L.Pr. 14 for the Italian proceedings.

The case was appealed, eventually, to the Supreme Court of Ireland, which rejected the demand to transfer adjudication to Italy on two main grounds. First, Eurofood was incorporated in Ireland and had its registered office in Dublin. The court ignored the fact that the de-facto management was done in Italy on grounds that Eurofood's corporate charter did not make any formal distinction between executive and non-executive directors. Hence, Eurofood's creditors had good reasons to organise "their business on the basis that they were dealing with an Irish company subject to Irish law which was administered in Ireland with its centre of main interests in this jurisdiction".

Second, Bank of America was not given sufficient notice about court-hearing in Parma. The Irish court found this to be a major breach of "fair procedure", which is "in Irish law, a principal of *public policy* of cardinal importance. It derives both from the rules of natural justice of the common law and from constitutional guarantees of personal and individual rights" (my emphasis). As noted above, Member States are not obliged to enforce decisions by the courts in other member states if they conflict with their own "public policy".

Hence, at least as far as the Eurofood case is concerned, the discretionary nature of the new legislation has actually contributed towards more legal uncertainty. In absence of the new legislation all the parties involved would probably assume that the case should be resolved in Ireland, and that Irish courts would exercise jurisdiction on Irish companies and their Irish creditors, like in the spontaneous order. Then came the new legislation and laid down some principles that Parmalat could use in order to bring the case back to Italy. However, no clear rules were provided, so that there were legal grounds to both transferring the case to Italy and to objecting such a transfer. Eventually, the process and the outcome were similar to those that would have prevailed under the spontaneous order (albeit lacing the good manners that characterised the English-American court exchange in the Cenargo case, the Irish court expressing strong opinions on the conduct of its Italian counterpart). With one important difference, that the legal uncertainty created by the new legislation led to encouraged litigation.

There is even some evidence in the Eurofood case that the legal uncertainty has raised the possibility of a creditors' run. It is claimed that one reason behind Bank-of-America's appeal for an Irish insolvency procedure was an "expressed concern that an attempt would be made to move the Centre of main interests of the

company ... from Ireland to Italy". Hence, the reason for the litigation was not insolvency per se but rather the creditor's fear that its rights would be diluted by a debtor's action to adjudicate the case in the jurisdiction of its own convenience.

Additional evidence to that effect can be found in the *Financial Times*, which reports practitioners' opinions regarding the legal environment created by the new legislation.[10] "The jurisdictional problem arises because of ambiguity about what is meant by the phrase "centre of main interests" ... In the face of this uncertainty, there has been a tendency to give weight to the courts which first handle the matter – hence lawyers' warnings about the need to act speedily."

4. Data analysis

Proponents of the European legislation might highlight the case of ISA Daisytek SAS, a French subsidiary of an English company.[11] Here, the French Court of Appeal in Versailles set aside a decision by the Pontoise District Commercial Court that refused to recognise an administration order by the High court of Justice in Leeds. The Versailles court examined the decision of the Court in Leeds, was convinced that it was taken on the basis of substantive arguments for Daisytek having the centre of its interests in England, and ruled that the Administration order is recognised in France "with no further formalities". Hence, a new insolvency order might be emerging in Europe after all, which might welfare-dominate the spontaneous order. Whether this is the case is an empirical question that should be considered on the basis of evidence.

In this section I turn attention to the data in order to address two questions. The first is, simply, how common it is for European companies to operate across several jurisdictions. More specifically, what percentage of companies own subsidiaries, or have corporate owners abroad – within or out of the EU. The second question is whether companies involved in such cross-country ownership have seen an increase in their cost of borrowing around the period when the law became effective.[12]

I have no direct information about the cost of borrowing. Instead, I address the second question by analysing the change in the level of gearing (leverage: debt over equity) across companies. It is stipulated that co-ordination problems within

[10] The case was actually appealed to the European Court of Justice where the Advocate General recommended that Eurofood would remain under Irish law; See Financial Times, September 28, 2005.
[11] See [2004] I.L.Pr. 6.
[12] For a similar study based on US data see Scott and Smith (1986).

insolvency would increase the cost of bankruptcy and induce companies to decrease their gearing. The disadvantage is that gearing may be affected by factors other than the cost of bankruptcy; for example, cyclical changes in the probability of bankruptcy, unrelated to bankruptcy costs. As much as I can, I control for these factors. However, analysing the problem via changes in gearing also has the advantage of capturing costs that are not reflected in the direct cost of lending; for example bankruptcy costs that ultimately fall on the equity holders rather than on the lenders.

To perform the analysis I use the Amadeus data-base for Europe's "top 250,000" companies, which contains data on both listed and unlisted companies. I limit the analysis to five countries: Germany, Spain, France, the UK and Italy. Accounting, shareholding and subsidiaries information is reported in three different sub-databases, which need to be merged; each company is thus identified across the three sub-files. Regarding cross-country ownership I limit myself to industrial ownership alone (ignoring ownership by pension-funds, other financial institutions foundations and private individuals), where I expect the co-ordination problems discussed above to be more acute. Several criteria are used in order to identify "substantial" ownership; these criteria, with other technical detail regarding the construction of the dataset are described in the Data appendix. The final outcome is a dataset with 116,445 companies, for the five countries mentioned above, covering the period 2001-2003 (with 2000 as a base point).

4.1 Descriptive statistics

Table 2 provides some descriptive statistics about the five countries in the dataset. The data is sorted by company size, where size is measured by the number of employees, a variable with a relatively low incidence of "non-available information" (except for the UK). Note that the German and British sub samples are less skewed towards small companies: the share of companies with less than fifty employees is 18% and 15%, compared with 35%, 26% and 32% in Spain, France and Italy (respectively). Also noteworthy is the higher level of gearing for German and British companies, 4.4 and 4.3, compared with 2.3, 2.1 in Spain France (respectively) with Italy in between at 3.7. This is still valid even after controlling for size: for companies with more than 5000 employees the corresponding numbers are 3.5 and 4.6, in contrast to 1.5, 1.8 with Italy at 3.4.

Insert Table 2 here

The phenomenon of cross corporate-ownership – either foreign or local – is quite common. Only about 30% of companies in Germany, France and Britain do not report an industrial shareholder. The numbers for Spain are somewhat higher, but that may be a small-company phenomenon. Italy is an outlier with 73% of companies reporting no industrial shareholder, the effect being present across all size groups. The phenomenon of foreign holder is less common, but by no means insignificant. Between 6 to 8% of companies in Germany, Spain France and the UK report a non-domestic EU shareholder; however, only 3.6% of Italian firms report such a shareholder. Interestingly, the phenomenon of non-EU industrial ownership is more common than EU ownership, the incidence of the former being about double the later; for the UK, the ratio is three to one. (Note that the columns in the holder section of Table 2 do not add up to 100%, for a company may report both a local and a foreign industrial owner).

Somewhat surprisingly, subsidiaries are not as-common phenomenon. Even among companies with more than 5000 employees, about 30% of German and Italian companies do not report any subsidiaries; the numbers are lower for the other countries: 7% in Spain, 8% in France and 6% in the UK. Conditional on having subsidiaries, the average number of subsidiaries per company is between 4 in Italy to 8 in Germany; the number of subsidiaries increase steeply with size. The vast majority of these subsidiaries are located locally, but the number of foreign subsidiaries is still significant for most countries. Conditional on having (non-zero number of) subsidiaries, the proportion of them located abroad but within (out of) the EU is[13] 13% (2%) for Germany, 9% (7%) in Spain, 14% (7%) in France , 3% (1%) in Britain and 6% (10%) in Italy. Unlike the case of industrial holders, owning non-EU subsidiaries is less common that owning non-domestic EU subsidiaries.

Answering our first empirical question – how significant is foreign ownership among sizable European companies – we thus conclude that the phenomenon is important, though not overwhelming. Around 6% of companies have a non-domestic EU industrial shareholder, while the incidence of a non-EU shareholder is at least double that much. About 40% of companies have subsidiaries, about 5-6 (on average) each, of which about 10% are non-domestic EU, and about the same amount located out of the EU.

[1313] 100×4.9/(100-63.3); see Table 2.

4.2 Changes in gearing

We run country-specific regressions where the dependant variable is either the level (Table 3) or the yearly differences (Table 4) in the logarithm of the level of gearing. The independent variables are firm characteristics such as total assets, return on assets, age, dummies for listing or industry and information about the presence of an industrial holder or the ownership of subsidiaries – foreign or domestic. The ownership of foreign subsidiaries is captured by a dummy (rather than a continues variable, as in Table 2): the variable "EU subsidiaries" receives a value of one if the percentage of EU subsidiaries (of the total number of subsidiaries the company has) is greater than 25%.

Insert Table 3 here

Insert Table 4 here

As before, we note the significant cross-country differences in the pattern of funding across Europe. Most strikingly is the effect of listing (the dummy "QUOTED") on gearing (see Table 3). In theory, the sign of this variable is ambiguous: a listed firm may afford a higher level of gearing knowing that it has access to a liquid equity market in case of distress, or may decrease gearing once the constraint of not having access to the equity market is removed. In Germany and Britain, the second effect is clearly dominating and is highly significant, both statistically and economically, the level of gearing being 60% lower among listed companies relative to unlisted ones. In Italy, the effect of listing is of the same sign, but is weaker economically and statistically. In France and Spain listing shows no significant effect on the level of gearing. The similarity in that respect between Britain and Germany is surprising given the common tendency of classifying them as two polar cases on the market-versus-institutions line of financial systems; see Alan and Gale (2000).

It is equally surprising that in spite of the structural differences, all five countries portray a very similar pattern of finance with respect to the return on assets and the lag gearing (in Table 4). Both effects are negative, have similar levels of statistical and economic significance, and are consistent with the trade-off theory where firms with high levels of gearing (due to 'profit shocks') revert back to a target level of gearing; see Mayer and Sussman (2005).

As for the main purpose of these regressions, Table 4 analyses the changes in gearing during 2001-2003. The dummies for (say) non-domestic EU and non-EU

industrial holders are interacted with the yearly dummies. Note that having any industrial holder – either a domestic or foreign – is included in the regression as a separate variable. Hence, the variable "EU-holder*2002" captures the marginal effect have a non-domestic EU industrial holder, relative to companies that have any industrial holder.

The sheer number of variables in the regression, and the fact that variables sometimes switch signs across years makes the results a bit difficult to interpret. The economic significance of the results is best conveyed through the accumulated effect of foreign ownership over the three years. Since "EU holder" captures the base-level-2001 effect of EU-holding, and since "EU-holder*2002" captures the marginal 2002 effect relative to the base level, the total 2002 effect (of EU holding) is the sum of these three variables. It follows that the accumulated 2001-2003 effect equals to

$$3\times(\text{EU holder}) + (\text{EU-holder*2002}) + (\text{EU-holder*2003}).$$

Corresponding measures for the accumulated effects of having non-EU industrial holders and for the ownership of subsidiaries (both non-domestic EU and non-EU) are calculated as well. The results, together with the relevant F tests are presented in Table 5.

Insert Table 5 here

Evidently, German, Spanish and British companies with a non-domestic EU industrial holder have significantly decreased their level of gearing by 15% to 40% during the period 2001-2003 over and above industry or cyclical effects, or even above the effect of just having an industrial holder (regardless of location). In France and Italy there was an insignificant fall in gearing. No significant change in gearing was detected for companies having non-domestic EU subsidiaries. The results for having non-EU subsidiaries have conflicting signs for the UK and Italy with the other countries having insignificant signs.

As with any other empirical result, the usual reservations apply: one would hope for more and higher-quality data, more directly related to insolvency and distress, and follow the trend for a few more years before firm conclusions can be drawn. And yet, one should be concerned with the virtual absence of evidence that is consistent with a reduction in the cost of capital following the new legislation. An alternative interpretation is that the fall in gearing is associated with only a temporary increase in the level legal uncertainty, which accompanies any legal reform.

Hopefully, future judgements would establish more precise rules regarding what exactly counts as public policy or centre of interests.

5. An alternative approach to harmonisation

The results of the previous sections raise the concern that the new EU-legislation has not achieved its goals. Admittedly, at this point the results are not – and cannot be – conclusive. Nevertheless, they do justify an effort of thinking about an alternative.

It seems that underneath the many technicalities that the new law deals with, there lies the fundamental view by which companies owe their very existence to the Nation State, and should live (and die) according to rules created by politicians and bureaucrats. Even the dispersed activities of an international company must gravitate towards a certain location, revealing its "real" identity, placing it under rules and regulations of its parent Nation State. It is doubtful, however, to what extent this view of companies is useful in an increasingly globalised world (as much as it is doubtful whether this view is valid to individuals). Nowadays a company may be born in one country, expand into another, merge and acquire companies of yet another country and so on. So when it dies, the question of its "real" identity is logically meaningless and practically unhelpful in resolving the conflicts among the remaining stakeholders.

Rather than insisting on a national identity of a fictitious personality, it is probably more useful to think of a company as a nexus of contracts, and to recognise up front the international dispersion of contractual counterparts and assets to which these contracts are linked. Since a mechanism for enforcing the contract and settling emerging disputes is an integral part of the contract itself, it makes sense to allow every contract to determine these clauses without state interference and independently of other contracts that the company has signed, and independently of decisions such as location of head office. No exceptions should be made for insolvency, which is just a standardised form of the default clauses of the debt contract. Essentially, I suggest that harmonisation of insolvency laws should pass from the Nation State to the market. Obviously, that can't be done without the State recognising the right of the company to contract freely, including the right to choose the rules under which the disputes should be resolved. The EU could have adopted a much simpler, more limited legislation to that effect, avoiding many of the difficulties that the current legislation has created.

Two possible objections to this proposal might arise; first, that some jurisdictions are inconsistent with others and second, thus such an arrangement would weaken the State's ability to save companies in which the public has a vital interest.

Regarding the first point, it is indeed very likely that such conflicts between jurisdictions exist; it is argued, however, that such conflicts should be resolved by the company itself, and that it is in its best interest to do so properly. It was already noted above that no compelling argument exists to the effect that concentrating all assets in default under a single jurisdiction is indeed economically efficient. Moreover, it was argued that concentrating all assets under a single jurisdiction (like in the EU legislation) may actually create more costly conflicts between (say) insolvency laws that are determined by the location of the head office and the employment laws that are determined by the identity (or place of employment) of the workers. Note also that the current proposal still allows the company to place all its assets under a single jurisdiction if it wishes to do so.

The second objection is that national governments will no longer be able to rescue companies of vital public interest in those cases where foreign courts prefer the interests of foreign creditors to those of domestic stakeholders. Note, however, that this does not prevent a rescue but makes it more costly because the domestic government needs to bail-out the distressed company from its foreign creditors. But this also highlight the more sinister side of schemes like Chapter 11, for it allows not just to rescue distressed companies but also to dump the cost on the secured creditors, typically on the (ever politically unpopular) banks. Even if this is a desirable solution, it still faces the difficulty of imposing a certain restriction on all companies just in order to address a problem that exists with only a few (i.e. publicly vital). A better policy would be to identify ex-ante those companies where externalities exist, and place the restriction on them only. That may be done by disallowing such companies to mortgage assets to any creditors, domestic or foreign. (See Frnaks and Sussman (2005) for a description of restrictions to that effect imposed by the British government on the corporate charters of public utilities). In short, the power to stay insolvency proceedings on all the assets – domestic and foreign – of any company is unlikely to be the optimal solution to the problems created by financial distress.[14]

[14] Note also that in any case the EU legislation did not resolve this issue, for a company may have the centre of its operation firmly establish in one country, and still generate significant externalities in another country.

6. Conclusions

Relatively little time has elapsed since the EU's insolvency law came into effect. Hence, any judgement about its performance is bound to be "too early". In this paper I was forced to fill in gaps in the evidence with speculation and common sense. Still, I believe that the combined effect of all the arguments put together has some weight, raising the concern that the legislation has not achieved the goal of decreasing cross-border borrowing. It may be premature at this stage to actually overturn the legislation, but not premature to start thinking – at least academically – think about a Plan-B. The approach proposed here differs radically from the one adopted in the EU legislation, in that it delivers the task of harmonisation from politicians and bureaucrats to market participants.

Data appendix

The dataset used for the analysis of this paper is constructed as follows. I start with "Amadedeus Financials – top 250,000 companies" (for Germany, Spain, France, the UK and Italy). To be included in this "top" category, firms need to satisfy at least one of the following criteria: revenue equal at least €15m, total assets equal at least €30m, number of employees equal at least 150 (for Spain, the numbers are 10, 20 and 100, respectively). I discard financial companies (SIC codes 60-63) and those whose "legal status" is other than "active". In cases where the data contained both consolidated and unconsolidated accounts I used the consolidated accounts. I have used data for the years 2001-2003 (and 2000 where lags are required); data for 2004 is still scarce, presently. For more detail about data extracted from Amadeus financial see Table A1.

The financial data were then matched with two other databases. The first is "Amadeus shareholders – top five shareholders". Among these, I identify shareholders that are classified as "Industrial Companies", ignoring shareholders such as financial institutions, foundations, families or the public. I did not use information about the ownership stake due to the high incidence of missing data, which could result in a significant drop in sample size. It is my impression, however, that the stake is significant, 100% in many cases. Industrial shareholders are then sorted by country of registration, and dummy variables are defined accordingly (see Table A1). Note the incidence of companies with several industrial shareholders of different locations.

The second database is "Amadeus subsidiaries – all subsidiaries". I discard subsidiaries where the stake of the owner (either direct or indirect) is smaller than 20%. I then track the number of subsidiaries per company, and calculate the percentage of them that is registered domestically, within the EU and out of the EU. See Table A1 for more detail.

It is notable that Amadeus financial is a dynamic database, while Amadeus shareholders and Amadeus subsidiaries are static databases. I have no choice but to treat changes in ownership during 2001-2004 as measurement errors.

Table A1: table of variables

Data sources and definitions for all variables used in the paper, by Amadeus sub databases.
Variable names in square brackets indicate an Amadeus variable name.

var. name	Source/description
	Amadeus Financial
empl.	[EMPL].
gear	[GEAR] = (loans + Non Current Liabilities) / (Shareholders Funds). Zeros excluded.
sales	[OPRE] Operating Revenue or Turnover (in $ terms)
assets	Total Assets [TOAS], £ for the UK, € for the rest.
age	2004 – (Year of Incorporation, [YEARINC])
return on assets	[RTAS] = (profit before taxation) / (Total Assets)
quoted	[QUOTED] dummy, equals 1 if firm is listed
industry	[USCOR] SIC industry code (2 digit). The following industry dummies were defined dagr: agriculture (01-09) dmin: oil and mining (10-14) dctr: construction (15-17) dfdt: food and tobaco (20-21) dtxt: textile and clothing (22-23) dwod: wood, pulp and paper (24-27) dchm: refining, rubber and chemicals (28-30)" dmch: metal and machinry dtrs: land transport (40-42) dshp: shipping (44) darl: airlines (45) dutl: utilities (46-49) dtrd: trade, wholesale and retailing (50-59)
	Amadeus shareholders – top five shareholders
no shareholder	a dummy indicating that no industrial shareholder was identified
local holder	a dummy indicating that the holder is domestically registered in the home
EU holder	a dummy indicating that the holder is registered abroad but within the EU
foreign holder	a dummy indicating that the holder is registered out of the EU
n.a. holder	a dummy indicating an industrial shareholder with unknown place of registration
	Amadeus shareholders – top five shareholders
no subsidiaries	a dummy indicating that no subsidiaries were identified
N of subs	number subsidiaries (at least 20% stake) identified
% local subs.	(number of local subsidiaries) / (N of subs.)
% EU subs.	(number of subsidiaries registered abroad but within the EU) / (N of subs.)
% non-EU subs.	(number of subsidiaries registered out of the EU) / (N of subs.)

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Table 1: comparative insolvency in Europe

Comparative insolvency statistics as reported by Davydenko and Franks (2004). Their database constitutes 2280 small firms (up to €75 million by turnover, but in excess of €100k in exposure), in distress (by Basel II definition), during the period 1995-2003 (earlier in France).

	UK	**Germany**	**France**
Bankruptcy procedure			
Automatic stay	none	3 months	unlimited
Dilution of contractual rights	none	limited	significant
Firm characteristic			
Book leverage (mean)	0.61	0.87	0.65
Security over debt (mean, %)	85	60	124
Interest margins (mean, %)	2.23	2.90	2.24
Current assets over current liabilities (mean)	1.05	N/A	1.35
Resolution of distress			
Default to recovery duration (median, years)	0.78	3.58	1.81
Piecemeal liquidation (mean, %)	43	57	62
Collateral realization (mean, %)	83	73	35
Recovery rate (mean, %)	74	76	54

Table 2: owners and subsidiaries by size groups

Size groups are determined according to the number of employees (if available). Accounting information appears on the left-hand side. All accounting variables are averages of firm-averages for the years 2001-2003. Data regarding the incidence of an industrial shareholder – if any – is provided in the middle section of the table. "None" indicates no such holder. Industrial shareholders are sorted by country of registration: locally (within the home economy), abroad but within the EU and out of the EU. "n.a." indicates a shareholder of unknown location. (Numbers do not add-up as a company may have more than one industrial shareholder.) Data regarding subsidiaries – if any – is provided on the right-hand side. "None" indicates percentage of firms with no subsidiaries. "Local" provides mean percentage of local subsidiaries (out the total number of subsidiaries). Similar definitions apply for "EU" and "non EU", "N of subs" provides for the mean number of subsidiaries (of all locations) per company, conditional on having a subsidiaries. See data appendix for more information regarding sources and definitions.

	accounting info.				incidence of firms reporting an industrial shareholder (if any) by location of shareholder (%)					distribution of subsidiaries (if any) by location of subsidiaries (mean %) and N of subsidiaries				
N of empl.	N of firms	gear	sales (m€)	assets (m€)	none	local	EU	non EU	n.a.	none	local	EU	non EU	N of subs.
Germany														
n.a.	2,318	5.7	130	175	32.7	55.6	6.9	11.0	6.7	66.4	29.3	3.9	0.4	4.3
0-50	4,922	4.5	50	117	44.0	43.6	6.1	10.6	3.5	76.8	21.0	2.0	0.2	3.0
51-100	3,434	3.3	43	108	31.6	57.2	6.3	10.7	3.7	72.7	23.9	3.0	0.3	2.5
101-250	7,253	4.3	52	132	28.8	62.6	4.9	9.6	4.8	66.0	29.0	4.4	0.6	2.5
251-1000	7,019	3.5	105	155	24.4	67.0	5.5	10.4	6.2	54.6	37.6	6.8	1.0	3.6
1001-5000	1,757	3.4	475	551	19.7	70.8	7.9	15.0	5.5	36.4	50.8	10.6	2.3	7.8
5001+	546	3.5	4972	7844	20.5	71.6	7.7	11.5	3.1	33.0	51.1	11.1	4.9	33.7
Total	27,249	4.4	178	520	30.4	59.7	5.8	10.6	5.0	63.3	31.0	4.9	0.8	4.8
Spain														
n.a.	1,575	4.8	41	94	43.3	49.1	5.7	7.8	1.2	65.0	30.3	2.7	2.0	3.4
0-50	6,175	2.6	19	28	50.5	40.5	4.6	9.4	1.3	60.5	35.6	2.2	1.8	3.5
51-100	3,252	1.9	28	26	42.1	46.0	6.1	12.8	1.7	50.5	41.4	4.7	3.4	3.4
101-250	3,951	1.8	33	35	38.3	48.6	6.8	16.6	1.8	46.5	43.1	5.7	4.6	4.2
251-1000	2,320	1.7	95	88	27.6	54.0	10.5	23.8	2.6	32.8	53.3	7.8	6.1	6.7
1001-5000	502	1.6	387	446	17.9	61.8	10.4	32.7	3.2	18.9	62.5	9.8	8.8	12.9
5001+	116	1.5	2853	3799	11.2	75.0	12.1	30.2	5.2	6.9	65.8	12.7	14.5	43.7
Total	17,891	2.3	64	79	41.5	46.6	6.4	14.1	1.7	50.9	41.1	4.5	3.6	5.1

Table 2 (cont.)

		accounting info.			incidence of firms reporting an industrial shareholder (if any), by location of shareholder (%)					distribution of subsidiaries (if any) by location of subsidiaries (mean %) and N of subsidiaries				
N of empl.	N of firms	gear	sales (m€)	assets (m€)	none	local	EU	non EU	n.a.	none	local	EU	non EU	N of subs.
France														
n.a.	2,133	4.3	43	244	38.1	48.0	8.6	13.5	2.5	60.1	33.4	4.4	2.1	4.8
0-50	5,448	2.2	39	54	40.7	46.0	6.6	13.0	0.4	65.8	29.5	3.2	1.6	4.4
51-100	3,294	2	32	30	29.7	58.6	6.2	14.5	0.3	70.0	24.8	3.7	1.5	3.0
101-250	5,157	1.6	45	39	23.2	64.8	7.2	15.9	0.7	60.2	31.4	5.7	2.8	3.4
251-1000	3,735	1.7	108	93	18.1	69.2	9.3	19.2	0.8	47.9	38.6	9.1	4.4	5.3
1001-5000	983	1.9	480	367	11.7	74.8	10.8	23.7	1.0	24.4	52.5	14.6	8.5	13.3
5001+	233	1.8	7132	8170	15.9	67.8	14.6	21.9	3.0	7.7	54.6	20.3	17.4	73.9
Total	20,983	2.1	155	178	28.7	58.5	7.6	15.7	0.8	58.7	32.6	5.8	2.9	6.7
UK														
			m£	m£										
n.a.	7,741	7.4	41	414	13.8	78.4	7.3	19.3	2.0	48.4	49.2	1.9	0.5	5.5
0-50	4,850	4.8	34	68	29.4	52.5	9.1	23.2	2.6	49.5	48.8	1.1	0.5	5.2
51-100	3,633	3.2	27	47	31.6	51.3	7.5	23.1	2.6	47.8	50.3	1.6	0.3	3.9
101-250	7,297	3.1	32	36	34.4	51.5	6.9	21.7	2.9	39.1	58.7	1.8	0.4	3.9
251-1000	7,048	3.4	73	96	31.9	54.2	7.0	22.8	3.0	31.7	65.3	2.2	0.8	5.0
1001-5000	2,233	4.4	278	479	23.5	59.7	8.3	29.4	4.1	16.8	78.0	3.3	1.9	9.6
5001+	653	4.6	2180	2925	27.0	51.9	4.4	25.9	8.0	6.3	80.2	6.4	7.1	27.0
Total	33,455	4.3	112	228	27.2	59.0	7.4	22.3	2.8	40.0	57.3	2.0	0.7	5.9
Italy														
			m€	m€										
0-50	5,309	4.8	31	38	85.9	9.6	1.6	2.4	2.2	80.5	15.3	1.3	2.9	2.4
51-100	3,159	3.3	31	30	77.3	14.2	2.6	5.5	3.9	69.8	21.2	2.7	6.3	2.7
101-250	5,013	3.2	43	41	68.2	18.9	3.9	8.6	5.5	65.4	22.4	4.5	7.8	3.1
251-1000	2,791	3.2	121	136	56.7	25.1	6.2	14.3	7.2	49.2	29.6	9.9	11.3	5.2
1001-5000	496	2.7	614	653	38.9	34.1	13.1	22.2	9.1	28.4	40.4	12.6	18.6	11.3
5001+	99	3.4	7131	10835	41.4	43.4	14.1	10.1	7.1	28.3	37.0	15.6	19.1	25.6
Total	16,867	3.7	108	135	72.5	16.7	3.6	7.4	4.5	67.0	21.7	4.3	6.9	4.2

Table 3: the level of gearing

Regression results for 2001-2003. Dependent variable: log(gear). The incidence of subsidiaries is indicated by dummies: "dummy: EU subsidiaries" equals 1 if "% local subs." (out of the total number of subsidiaries, see Data appendix) is greater than 25%. Regressions' intercepts are not reported. The absolute value of t-statistics appears in parentheses. Twelve industry dummies are included, for which the joint significance is indicated by an F test. A * indicates significant at 5% level, ** indicate significant at 1% level.

	Germany	Spain	France	UK	Italy
log(assets)	0.020 (1.95)	0.123 (12.62)**	0.106 (15.04)**	0.097 (18.22)**	-0.028 (3.39)**
return on assetst	-0.009 (8.62)**	-0.059 (51.16)**	-0.046 (56.75)**	-0.027 (45.04)**	-0.062 (61.53)**
log(age)	0.079 (5.57)**	-0.303 (19.07)**	-0.044 (3.99)**	-0.347 (39.98)**	-0.020 (1.45)
dummy: QUOTED	-0.627 (13.15)**	-0.024 (0.26)	0.072 (1.47)	-0.658 (15.77)**	-0.546 (7.80)**
dummy: industrial holder	0.087 (2.44)*	-0.081 (3.25)**	-0.011 (0.54)	0.509 (26.47)**	-0.201 (8.18)**
dummy: EU holder	-0.032 (0.55)	-0.110 (2.40)*	-0.109 (3.27)**	-0.049 (1.57)	-0.156 (3.37)**
dummy: non-EU holder	-0.200 (4.41)**	-0.507 (14.74)**	-0.434 (17.25)**	-0.185 (8.90)**	-0.338 (9.33)**
dummy: holder, location unknown	-0.304 (4.85)**	0.134 (1.60)	0.046 (0.42)	-0.065 (1.44)	0.129 (3.08)**
dummy: subsidiaries	-0.098 (2.82)**	-0.054 (2.16)*	-0.177 (8.81)**	-0.144 (8.35)**	0.007 (0.32)
dummy: EU subsidiaries	-0.046 (0.94)	-0.005 (0.11)	-0.112 (3.38)**	-0.089 (1.88)	-0.040 (1.02)
dummy: non-EU subsidiaries	-0.081 (0.98)	0.047 (0.95)	0.013 (0.30)	-0.316 (4.45)**	0.198 (6.37)**
dummy: year 2002	-0.025 (0.78)	-0.043 (1.95)	-0.082 (4.31)**	-0.049 (2.73)**	-0.038 (2.18)*
dunmmy: year 2003	0.011 (0.24)	-0.185 (2.98)**	-0.107 (4.45)**	-0.110 (5.42)**	-0.122 (1.54)
dummies: industries	F=22.48**	F=10.50**	F=9.75**	F=26.23**	F=17.98**
N R-squared	9,042 0.07	30,254 0.12	44,087 0.08	59,876 0.09	25,918 0.15

Table 4: change in gearing

Regression results for 2001-2003 (and some 2000 lags). Dependent variable: log(gear)-log(gear)$_{-1}$. The incidence of subsidiaries is indicated by dummies: "dummy: EU subsidiaries" equals 1 if "% local subs." (out of the total number of subsidiaries, see Data appendix) is greater than 25%. The absolute value of t-statistics appears in parentheses. Twelve industry dummies are included, for which the joint significance is indicated by an F test. A * indicates significant at 5% level, ** indicate significant at 1% level.

	Germany	Spain	France	UK	Italy
log(gear) $_{-1}$	-0.230 (29.89)**	-0.183 (50.81)**	-0.231 (70.84)**	-0.180 (69.45)**	-0.203 (51.55)**
log(assets) $_{-1}$	-0.007 (1.05)	0.004 (0.65)	0.005 (1.21)	0.019 (5.91)**	-0.029 (5.80)**
return on assets	-0.002 (2.11)*	-0.012 (15.99)**	-0.010 (16.50)**	-0.003 (8.16)**	-0.009 (12.71)**
log(age)	0.040 (3.94)**	-0.075 (7.43)**	-0.001 (0.17)	-0.038 (6.72)**	-0.039 (4.41)**
dummy: QUOTED	-0.029 (0.92)	0.103 (1.94)	0.107 (3.47)**	-0.009 (0.39)	0.125 (2.84)**
dummy: industrial holder	0.028 (0.71)	0.020 (0.97)	0.025 (1.19)	0.087 (4.56)**	-0.047 (2.23)*
interaction dummy: holder*2002	0.035 (0.65)	-0.046 (1.59)	-0.058 (1.95)	0.031 (1.19)	0.018 (0.60)
interaction dummy: holder*2003	-0.041 (0.55)	-0.096 (1.06)	-0.012 (0.33)	0.003 (0.09)	-0.009 (0.08)
dummy : EU holder	0.044 (0.66)	-0.071 (1.77)	-0.060 (1.77)	-0.001 (0.02)	-0.057 (1.36)
interaction dummy: EU-holder*2002	-0.076 (0.84)	-0.049 (0.86)	0.078 (1.65)	-0.051 (1.25)	0.036 (0.61)
interaction dummy: EU-holder*2003	-0.250 (2.16)*	-0.144 (1.15)	0.012 (0.20)	-0.099 (1.88)	0.017 (0.11)
dummy: non-EU holder	0.054 (1.06)	-0.089 (2.99)**	-0.134 (5.20)**	-0.028 (1.42)	-0.063 (1.98)*
interaction dummy: non-EU-holder* 2002	-0.084 (1.22)	-0.029 (0.69)	0.006 (0.18)	-0.029 (1.06)	0.005 (0.11)
interaction dummy: non-EU-holder* 2003	-0.120 (1.31)	0.044 (0.47)	0.037 (0.85)	0.002 (0.07)	-0.119 (0.82)

Table 4 (cont.)

dummy: holder, location unknown	-0.095 (1.37)	0.046 (0.64)	-0.003 (0.02)	-0.009 (0.20)	0.087 (2.33)*
interaction dummy: unknown-holder* 2002	0.109 (1.16)	-0.038 (0.37)	0.014 (0.08)	0.022 (0.35)	-0.079 (1.50)
interaction dummy: unknown-holder* 2003	0.089 (0.64)	-0.004 (0.02)	-0.061 (0.30)	-0.013 (0.20)	0.070 (0.47)
dummy: subsidiaries	0.008 (0.21)	0.030 (1.49)	-0.019 (0.97)	0.034 (2.04)*	-0.004 (0.19)
interaction dummy: subsidiaries*2002	-0.031 (0.63)	0.004 (0.16)	-0.033 (1.21)	-0.023 (0.99)	-0.033 (1.26)
interaction dummy: subsidiaries*2003	0.101 (1.47)	-0.072 (0.86)	0.021 (0.62)	-0.034 (1.34)	0.023 (0.20)
dummy: EU subsidiaries	-0.020 (0.40)	-0.020 (0.51)	0.021 (0.63)	-0.009 (0.21)	0.052 (1.55)
interaction dummy: EU-subs.*EU2002	0.045 (0.64)	-0.012 (0.22)	-0.016 (0.34)	-0.069 (1.09)	-0.050 (1.04)
interaction dummy: EU-subs.*2003	-0.062 (0.68)	0.157 (1.34)	-0.009 (0.16)	0.099 (1.36)	-0.155 (1.18)
dummy : non-EU subsidiaries	-0.019 (0.24)	0.024 (0.57)	0.005 (0.12)	-0.148 (2.19)*	0.083 (3.10)**
interaction dummy: non-EU-subs.*2002	-0.012 (0.10)	0.066 (1.11)	0.083 (1.34)	0.147 (1.59)	-0.013 (0.35)
interaction dummy: non-EU-subs.*2003	0.059 (0.42)	-0.213 (1.78)	-0.020 (0.28)	-0.026 (0.27)	0.065 (0.55)
dumies: industries	F=1.93*	F=2.39**	F=1.29*	F=5.09**	F=2.22*
dummy: year 2002	-0.173 (3.40)**	-0.019 (0.79)	-0.010 (0.39)	-0.020 (0.78)	-0.015 (0.99)
dummy: year 2003	-0.220 (3.11)**	0.037 (0.41)	-0.067 (2.08)*	-0.073 (2.62)**	-0.054 (0.66)
Constant	1.142 (18.08)**	0.999 (25.39)**	0.917 (26.56)**	0.763 (26.57)**	1.227 (31.94)**
N	6,816	27,389	40,450	51,124	24,713
R-squared	0.14	0.09	0.11	0.09	0.10

Table 5: accumulated 2001-2003 effect on gearing

The marginal effect – on gearing – of having an EU or a non-EU shareholder or a subsidiary, accumulated over the entire 2001-2003 period. Calculations are based on Table-4 regressions. The marginal effect of having, say, an EU-industrial shareholder in 2002 equals to the base-2001 effect, namely "dummy: EU holder" *plus* the "interaction dummy: holder 2002". Marginal effects for 2001and 2003 are similarly calculated and added up so as to get the accumulated effect. An F statistic to test the hypothesis that the above-calculated accumulated effect equals to zero appear in parentheses. A * indicates significant at 5% level, ** indicate significant at 1% level.

	Germany	**Spain**	**France**	**UK**	**Italy**
EU idustrial shareholder	-19% (2.06)*	-40% (9.33)**	-9% (1.61)	-15% (6.52)**	-11% (0.55)
non-EU industrial shareholder	-4% (0.23)	-25% (6.13)*	-36% (47.67)**	-11% (7.63)**	-30% (4.11)*
EU subsidiaries	-8% (0.58)	9% (0.49)	4% (0.33)	0% (0)	-5% (0.13)
non-EU subsidiaries	-1% (0.01)	-8% (0.31)	8% (0.82)	-32% (6.74)**	30% (5.98)*