

# Secured Creditor Control in Bankruptcy: Costs and Conflict

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## **Abstract**

The secured creditor control in the resolution of distress in small businesses can have two effects: it can reduce the ex-post cost of financial distress but, on the other hand, secured creditors and business owners may collude to divert value from junior creditors. This concern has been particularly expressed in the US for state procedures under which a large percentage of small businesses are restructured. In the UK the secured creditors have introduced the highly contested practice of pre-packs which vividly highlights this trade-off. In a pre-pack, an insolvency practitioner, appointed by the secured creditor, can privately sell the company without involving the courts or consulting with junior creditors and in 50% of the cases the company is sold back to the original owner. Contrary to widespread criticism that this procedure leads to collusion, we find no evidence of exploitation of conflict of interests and we find that it preserves the value of the business and maximizes recovery in circumstances in which a public announcement of bankruptcy would destroy value. In small businesses where secured creditors are concentrated the benefits of their control seem to outweigh the costs. This evidence contradicts the view that court supervision, instead of freedom of contracting, is always needed to avoid expropriation. Moreover, the findings of the paper have important implications for debates about auction designs of bankruptcies and for the social implications of using floating charge as a debt resolution mechanism.

**JEL Codes:** G30, G33, G34

**Keyword:** Bankruptcy, Auction, Going Concern Sale, Floating Charge, Reputation

*'The whole thing stank of fish. [...] Does that raise a potential conflict of interest for owner-directors and administrators? Only one the size of France.'* *Financial Times*, January 21, 2009

*'Britain is in danger of becoming the bankruptcy brothel of the world.'* *Times*, October 18, 2010

## **1 Introduction**

The traditional solution that economists have envisioned to solve the collective action problem created by junior creditors forcing the company into piecemeal liquidation where a going concern value is higher (Jackson, 1982) has been the introduction of a state provided bankruptcy procedure (Hart, 2000). However, in some countries the collective action problem is solved by the prior adoption of a capital structure (the floating charge) which gives a single bank dominant control in the event of financial distress. For instance, Franks and Sussman (2005) describe the UK bankruptcy system as a 'contractualist' regime "where bankruptcy law is little more than the strict enforcement of the default clauses in the debt contract, as negotiated ex ante by the lender and the borrower". Diankov et al. (2008) confirm that when the floating charge is legally allowed is used and works well also in other countries. Franks and Sussman (2005) suggest that in the UK system where the secured creditor is in control the way to reorganize a business is not through the preservation of the company entity as in a Chapter 11 reorganization in the US but through the sale of the business to a new owner who will incorporate the assets under a different name<sup>1</sup>.

Nevertheless, in the current practice of bankruptcy these differences, at least in term of outcomes, seem to be less pronounced. Ayotte and Morrison (2009) find "pervasive" creditor control also in Chapter 11 and Baird and Rasmussen (2003) argue that, due to this increasing control, we have seen a dramatic increase in the proportion of Chapter 11 cases that result in piecemeal liquidation or a going concern sale. According to Casey (2011), "the norm for today's corporate reorganization is a

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<sup>1</sup> For a complete review of the empirical and theoretical literature on bankruptcy see Hotchiss et al. (2008).

quick going concern sale”<sup>2</sup>. If instead of considering the large companies which enter into Chapter 11 we consider the small businesses that in large percentage are restructured under state laws instead of federal laws (Chapter 11) the differences between the US and the UK become even smaller. Morrison (2009) documents that when secured creditors are concentrated small businesses tend to restructure under the state procedure called assignments for the benefits of creditors (“ABCs”)<sup>3</sup>. In these procedures the debtor assigns its business to a trustee, who sells the business with the consent of the secured creditor and unsecured creditors have little power to interfere.

Given the increased secured creditor control also in the US, recent literature is looking at the effects of this control and at the potential conflict of interests between secured and unsecured creditors. For instance, studying large listed companies entering into Chapter 11 in the US, Ayotte and Morrison (2009) show that the creditor conflict creates distortions: it causes inefficiently quick sales when the secured creditor is in control and inefficiently slow sales or reorganizations when the unsecured creditors gain some control. In the resolution of distressed small businesses the concerns seem different. Here the secured creditor control can have two effects: it can reduce the ex-post cost of financial distress but, on the other hand, secured creditors and business owners may collude to divert value from junior creditors. Morrison (2009) reports that, according to many practitioners, ABCs are faster and cheaper than federal procedures but they are subject to abuse. An auction to sell the business can be conducted with few, if any, bidders other than the manager-owner, whose bid can be funded by existing secured creditors. Where the business is sold back to the owner, the unsecured creditors are concerned about potential conflicts of interest but they tend to be dispersed and their stake is usually too small to warrant monitoring. This dynamic of potential collusion between owners and secured creditors evokes the “equity receivership” developed for the railroads in distress in the 20<sup>th</sup> century in the US.

While we have no empirical evidence on the outcomes of ABCs in the US, we have some evidence on the potential collusion between owners and secured creditors in small businesses from Sweden where bankruptcy sales are in fact mandatory.

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<sup>2</sup> LoPucki (2003) found that going-concern sales accounted for less than 20 percent of Chapter 11 cases filed by large, publicly traded firms during the 1980s but this percentage went up to 75% in 2002.

<sup>3</sup> In Morrison (2009)’s data the percentage of companies restructured under federal laws and the percentage of companies restructured under ABCs are similar.

Stromberg (2000) suggests that whenever a sale-back occurs, there will be, in principle, a deviation from absolute priority because the secured creditor and the owner-manager often share some going-concern surplus of the continued firm at the expense of unsecured creditors. However, Eckbo and Thorburn (2008) show that the prices in salebacks and in non-saleback going-concern sales are indistinguishable.

This paper addresses the above question about the effects of the secured creditor control in small businesses by studying the secured creditor friendly UK environment where banks have introduced the highly contested practice of pre-packs which vividly highlights the trade-off between the reduction of ex-post costs of financial distress and the risk of collusion. A further advantage of our paper, in comparison with the previous literature, is that we have information on both secured and unsecured debt recovery rates and so we are better positioned to analyse the distributional concerns.

A pre-pack is a new controversial business practice related to the sale of the business in bankruptcy which has emerged within the pre-existing UK legal framework since the end of 2001. By 2004, pre-packs were used in more than 16% of insolvency cases. In a pre-pack the main bank or one of the directors of a company in financial distress (with the agreement of the main bank) calls in an insolvency practitioner (IP). The IP tries to identify discreetly if there are any parties that may be interested in buying the company. If a potential buyer can be found (he can also be the original owner-manager) the IP is publicly appointed (typically out of court) as administrator/receiver and immediately sells the company to the buyer. The business (usually including the workforce) is transferred to a new company and the proceeds from the sale are used to pay back creditors in the normal order of priority. The UK version of pre-packs stands as a unique case where the whole bankruptcy procedure lasts less than three days and it is usually concluded in just one day. Moreover, the UK is the only country where an insolvency practitioner can privately sell a company without involving the courts or consulting with junior creditors<sup>4</sup>.

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<sup>4</sup> To minimize the direct and indirect costs associated with bankruptcies, many countries have introduced or are introducing prepackaged bankruptcies through legal reforms of their respective bankruptcy codes (Phillips and Kaczor, 2010). For instance, there are pre-packaged bankruptcies in Chapter 11 in the US as well but these are very different from their UK counterparts. Pre-packs in the US, which are particularly relevant for firms with public debt (Tashjian, Lease and McConnell, 1996), involve a reorganization plan being negotiated with creditors prior to bankruptcy and being filed concurrently with the bankruptcy petition. They have the same voting rules as traditional Chapter 11 but avoid the long and costly bankruptcy proceedings normally associated with Chapter 11.

According to the advocates of this insolvency tool, the speed and the discretion of the process are its greatest virtues because of the adverse effect that the suggestion of formal insolvency has on the perception of the company's staff, suppliers and customers and hence on its value. Only an early sale may maintain the value of the company "preserving the intangible mixture of reputation, name and customer loyalty"<sup>5</sup>. On the other hand, a potential conflict of interest arises when the sale is to a connected party. Directors and shareholders of a distressed company can, with the agreement of the secured creditors, i.e. the banks, buy back their business, removing the unsecured creditors in the process, without organizing a public auction<sup>6</sup>.

Using a sample of 820 bankruptcies procedures (including both administrations and receiverships) between 16 September 2003 and 16 September 2004 this paper will analyze the efficiency of pre-packs, in particular pre-packs to connected parties, in comparison to other bankruptcy outcomes and attempt to answer the following questions. Is there any evidence of exploitation of conflict of interests? If not, is there evidence of enhanced efficiency?

The only evidence about pre-packs in the UK to date comes from a report commissioned by the Association of Business Recovery Professionals (Frisby, 2007). The report describes pre-packs in the period 2001-2004. Frisby finds that: a) pre-packs perform better than non-pre-pack sales<sup>7</sup> in terms of employment retention (in 92% of pre-packs all of the employees are transferred to the new businesses, whereas this occurs in only 65% of normal business sales), b) firms are sold back to a connected party in 55% of pre-packs and 52% of normal business sales, c) secured creditors seem to perform better in pre-packs while unsecured creditors perform worse, d) a business sold back to a connected party is more likely to fail again thereafter. However, as Armour (2011) notes these findings "should be treated with caution". They are simply based on comparison of means without other statistical tests, without controlling for other variables that may have an impact on the outcomes and without correcting for the possible selection biases that could arise from the fact that bankruptcy procedures are a choice outcome.

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<sup>5</sup> New Business, 2 June 2009

<sup>6</sup> The US ABCs differ from the UK pre-packs in so far as in the US a public auction is mandatory.

<sup>7</sup> In a non pre-pack sale the company enters into the bankruptcy proceeding, the IP advertises the sale of the business soliciting bids (often through an advertisement in the Financial Times). Usually the company is sold within one month to the higher bidder.

Drawing on the same database collected by Sandra Frisby for the Association of British Recovery Professionals and extending it with information on industry characteristics and credit scores data we examine the following. First, we observe that cases of sales to connected parties are associated with very small companies in comparison to cases of sales to outsiders, namely half the size. If we consider only the cases which are sold back to the owners we observe that pre-packs are very different in terms of their industry characteristics from the other sales: the pre-packs are cases where the role of employees, reputation and intangibles is much more important. This seems to suggest that pre-packs to connected parties are used to preserve the value of businesses. This is confirmed by the analysis of the recovery rates: even controlling for the selection effect the recovery rates of connected pre-packs are not different from other sales and their refiling rate is not higher than other sales.

Then we look at the conflict of interest that may arise in pre-packs from a deviation of absolute priority with owner-managers getting part of the rent which was supposed to go to the unsecured creditors. The IP, who is *de facto* hired by the floating charge holder (the main bank), will seek to maximize the realization of the sale if there is a risk of the secured creditor being paid less than in full. On the other hand, if the bank is going to be paid in full, the potential extra-rent after the payment to the bank could be appropriated by the owner-manager (buying back the business at a lower price) or by the IP (through higher fees).

The empirical analysis reveals no evidence of exploitation of these conflicts of interest. If we consider only the sample where the bank is paid in full, pre-packs to connected parties are characterized by: a) returns to unsecured creditors which are low but not statistically different from other types of sales and b) a lower ex-ante intrinsic value which rules out the concern that alternative procedures could have produced higher returns to the unsecured creditors. Furthermore, the bank is not paid in full more often in pre-packs to connected parties. The absence of evidence of a fraudulent use of this procedure could be due to the fact that the floating-charge holders do not want to be associated with controversial or contested transactions.

Finally, we observe that the ex-ante characteristics of pre-packs, in terms of size and industry, and cases of piecemeal liquidations are very similar suggesting that pre-packs may be used as a mechanism to pre-empt excessive liquidations. This is beneficial for creditors (the recovery rates of going concern sales are much higher

than the recovery rates of piecemeal liquidations) and society (employees keep their jobs and viable businesses are preserved).

These results suggest that in small businesses where secured creditors are concentrated the benefits of their control seem to outweigh the costs. This provides a benchmark for evaluating likely effects of the secured creditor control in resolution of small businesses also in other countries, for instance in the state procedures in the US.

These findings have also an important implication for the debate about the social implications of using floating charge as debt resolution mechanisms. Contrary to the view that since ‘contractualist’ bankruptcy systems confer control in distress on the owner of the floating charge, they create a liquidation bias to sell the firm’s assets piecemeal (Acharya, Sundaram and John, 2004), Franks and Sussman (2005) find that UK banks try to rescue companies rather than opt for automatic liquidations on violation of debt covenants.<sup>8</sup> Here we show that, once in bankruptcy, floating charge holders have an incentive to sell the business as a going concern rather than piecemeal. To achieve this in a larger set of circumstances, banks introduced the business practice of pre-packs to connected parties. Where firms are small and their values rest on intangibles, reputations, employees and the human capital of the owner, the floating charge holder will have an incentive to organize a pre-packaged sale-back of the business. This reinforces the empirical (Dyankov et al., 2008) and theoretical (Gennaioli and Rossi, 2009) evidence on the efficiency of the floating charge debt as a resolution of financial distress.

Finally, the paper contributes to the debate on auctions in bankruptcy. A well known result from auction theory says that adding a bidder is always beneficial for the seller, because it increases the competition between the buyers (Bulow and Klemperer, 1996). Since public auctions attract the largest number of potential buyers, selling the business through a public auction should be superior to the recourse of a private auction, even absent conflicts of interests. Section 363 in the US and mandatory auctions in Sweden are both based on the assumption that a market test by auction maximizes recovery. This analysis suggests an argument against auctions: in some circumstances, namely in those industries where exposing the

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<sup>8</sup> Davydenko and Franks (2008) show also that the proportion of going concern reorganizations, in and out of formal bankruptcies, is higher in the UK than in more rescue-oriented regimes such as France.



business to the market is particularly likely to undermine the value of assets, exposing firms to market tests might destroy value and negotiation might dominate auctions.

The paper is organized as follows. Section 2 provides the legal framework. Section 3 presents the theory and hypotheses. Section 4 describes the data and Section 5 reports the empirical results. Section 6 concludes the paper.

## **2 Legal Structure**

Franks and Sussman (2005)'s historical analysis of English insolvency law reveals that it evolved through lenders and borrowers exercising their right to contract freely. The design of insolvency procedures was left to the parties who incorporated it into debt contracts and the role of the State was basically limited to enforcing the contracts. In the late 19<sup>th</sup> century English Law did not impose any constraints on debt contracts but over time the accumulation of case law led to a standardization of lending instruments.

Loan securities in the UK can be either fixed charges (a security on a specific asset) or floating charge (a security on the whole of the company's asset). In the event of default, the floating charge holder is under the control of company and the floating charge debt therefore defines the insolvency procedure. Under this procedure, called receivership, on breach by the debtor of the terms of the loan agreement a creditor holding a floating charge is able to appoint an administrative receiver whose function it is to realize the company's assets for the benefit of the appointing creditor. Upon appointment, the receiver becomes the agent of the company but the primary fiduciary duties are to his appointing charge-holder. The receiver has the choice of selling the business as a going concern or piecemeal. The Cork Committee established in 1982 that receivership was a useful institution: it was quick and flexible and the receiver was able to sell the business as a going concern if it was judged to be a viable business.

The Insolvency Act of 1986, based on the proposal of the Cork Committee, granted statutory powers to the receiver and introduced a new procedure called administration, to extend the benefits of the encompassing control by the office-holder to situations where companies did not give a floating charge to any creditor. 'As originally conceived, administration was intended to replicate the benefits of

receivership, instead of replacing it' (Armour et al., 2012). The administration constituted a statutory moratorium on the enforcement of all claims, the entry was through a court order and the appointed administrator<sup>9</sup> had the power to choose whether to sell the business or try to reorganize it. However, the holder of the floating charge had the power to veto the appointment of the administrator and appoint a receiver instead.<sup>10</sup>

Since the introduction of the Insolvency Act, administration has been very rarely used<sup>11</sup> and the criticism of receivership has intensified. It was thought that in some circumstances giving all the decision power to the secured creditor had a perverse incentive. When the value of the company is higher than the amount of secured debt, the secured creditor is not a residual claimant, so will be biased against the continuation of the business and will try to get the money back through a quicker closure and piecemeal liquidation (Aghion, Hart and Moore, 1992). Moreover, it was thought that in cases where the human capital of the owner-manager was essential for the continuation of the business and the reorganization of the corporate entity was the only way of rescuing it, then there was no mechanism for achieving this in the UK.

In light of these concerns, the Enterprise Act in 2002 abolished receivership<sup>12</sup> and reformed the rarely used administration<sup>13</sup>. In the 'new' administration procedure: a) the administrator can be appointed out of court<sup>14</sup>, b) if the administrator is appointed by the company and/or its directors, the floating charge-holder can replace him with their own preferred candidate, c) the administrator is expressly obliged to perform his functions in the interests of the company's creditors as a whole, d) a hierarchy of objectives is stipulated for the administrator making clear that the first objective is to rescue the company.

However, the introduction of the law did not alter the balance of power between the floating charge-holders and unsecured creditors. In fact, Armour et al. (2012)

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<sup>9</sup> The appointment in administration can be made also by the company and/or its directors.

<sup>10</sup> This is in line with the view that the new procedure is "gap-filling" for cases where there is no floating charge (Armour, 2011)

<sup>11</sup> Probably because of the veto power on the appointment of administrator exercised by the floating-charge holder.

<sup>12</sup> Holders of floating charges created after 15 September 2003 are prohibited from appointing a receiver.

<sup>13</sup> There are other procedures in the UK which are less relevant for our discussion here. For an overview of them and an interesting comparison with Sweden see Cook and Pond (2006).

<sup>14</sup> This was done to increase the ease of entry and eliminate the cost of court applications and hearings.

show empirically that the new law had no meaningful impact on unsecured creditor recoveries. The reasons for this are the following. First, the out of court entry and the privileged appointment rights attributed to the charge-holder on the choice of the administrator mean that the ‘new’ administration is similar to the abolished receivership. Second, despite the fact that the administrators now have duties to all the creditors, the IPs will try not to make a decision which is detrimental to the banks for fear of not being hired again in the future. The banks are, in fact, repeat players in the insolvency procedures and they have control over the appointment decision. Finally, according to Armour (2011) there are ‘major limitations to the ability of the administrator’s duties to generate real accountability to unsecured creditors’<sup>15</sup>. According to the Parliament’s intentions, the courts are supposed to give deference to the business judgment of the IPs, questioning the judgment only on the basis of ‘irrationality’ and there are significant procedural obstacles to bringing an action for breach of duty against an administrator.

Contrary to what is suggested by Walton (2009), the emergence of pre-packs, which have been increasingly used since 2001-2002 (Frisby, 2007) is not related to the abolition of receivership for two reasons: first, as we just described, the law did not make any substantial difference to the control of floating charge-holders and, second, pre-packs have been executed under both receivership and administration before and after the introduction of the new law. We will provide an alternative explanation of the emergence of pre-packs later in the paper.

In a UK pre-pack, a deal to sell the company is agreed prior to insolvency and is completed immediately after the appointment of a receiver/administrator. As suggested above, this does not involve a plan being approved by different classes of creditor or the involvement of the court in approving activities of the receiver/administrator before or after the plan is executed. In 2008 an unsecured creditor, HMRC, opposed an administration order<sup>16</sup> related to the sale of DKLL Solicitors (DKLL Solicitors v. HMRC) on the basis that unsecured creditors would be disenfranchised and would have no say in the administration. The High Court made

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<sup>15</sup> The courts should give deference to the business judgment of the IPs and there are significant procedural obstacles to bringing an action for breach of duty against an administrator.

<sup>16</sup> Court applications for administration are rare after the coming into force of the Enterprise Act which allows initiating the administration out of court. However, they do happen when a winding up petition has been brought or the company is active in various jurisdictions.

the order despite HMRC's opposition on the basis of the commercial judgment of the IP who convinced the Court that the realizations from the sale were higher than those from a piecemeal liquidation.<sup>17</sup>.

### 3 Theory and Hypotheses

In this section we state the four hypotheses that will be tested in the empirical section. According to the advocates of pre-packs, the speed and the discretion of the process are its greatest virtues and help minimize the ex post costs of bankruptcy. Insolvency procedures can have severe effects on a company's business: stakeholder groups will attempt to protect their positions to the detriment of the company. Suppliers may not want to keep dealing with the company and since UK courts, unlike their US counterparts in Chapter 11, cannot oblige suppliers to keep supplying debtors in administration, this can easily destroy the company's supply chain. The departure of valuable employees during bankruptcy could dissipate a firm's going concern value to the point at which liquidation becomes inevitable (Wang, 2009)<sup>18</sup>. Moreover, once-loyal customers are likely to switch to other companies<sup>19</sup>. The present value of profits forgone because of the damaging effect of financial distress is defined as "indirect bankruptcy costs" (Altman, 1984)<sup>20</sup>. Meeks and Meeks (2009) speak of "self-fulfilling prophecies of failure": the news that a company is likely to fail diminishes the value of its assets and raises the costs of servicing its liabilities. The erosion of the value of the company starts from the earliest phases of distress and continues during the insolvency process. The indirect and direct costs which include fees of lawyers, accountants and other professionals increase with the length of time

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<sup>17</sup> After this ruling, other two cases *Kayley Vending Ltd, Re* [2009] and *Halliwells LLP, Re* [2010] confirm the positive stance of the High Court toward pre-packs. In the latter case, the Judge Kitchin observed that the proposed pre-pack was "the only way forward" for the firm in administration. Recently in January 2009, in order to increase the transparency of pre-pack sales the Insolvency Service introduced a Statement of Insolvency Practice ('SIP') 16 requiring a wide range of information to be disclosed to creditors regarding best efforts to achieve the highest price.

<sup>18</sup> Wang (2009) shows also that employees do not seem to leave prior to bankruptcy filing but during bankruptcy itself. In particular, workers may decide to stay if they think that within the bankruptcy process the firm has some prospects for survival after bankruptcy.

<sup>19</sup> For instance, in the US, Chrysler lost sales representing 2% of the national car market because potential buyers feared the company would go bankrupt (Altman, 1984).

<sup>20</sup> The literature on indirect costs includes the inefficiencies related to the fact that a bankruptcy filing may distract managers from the proper management of the firm's operations and might change their incentives, favouring "gambling for resurrection". These two sources of indirect costs are less relevant in the UK where reorganizations of businesses in bankruptcy are rare. For a survey of indirect and direct costs in the US see Bris, Welch and Zhu (2006)

spent in bankruptcy (Franks and Torous, 1989)<sup>21</sup>. To minimize these costs, many countries have introduced pre-packaged bankruptcies to shorten the duration of the bankruptcy procedures. Skeel (2009) mentions that nowadays often lawyers speak of “melting ice cubes”: company’s assets are a melting ice cube and will liquify unless action is taken immediately. In some circumstances, only a quick and discrete sale can preserve the value. This leads to the following hypothesis:

*H1: If pre-packs and, in particular pre-packs to connected parties, are used to preserve the value that would otherwise “evaporate” with the entry of the company into an insolvency procedure we should observe them in industries where the role of employees, reputation and intangibles is more important.*

If the IP decides to sell the business in a pre-pack, he will discretely market it on a confidential basis to potentially interested buyers running a type of “private auction”. The alternative for the IP is to formally enter into insolvency, making a public statement that the company is on sale and in this way bringing forward all potential buyers. Selling the business through a public auction should be superior to the recourse of a private auction, even absent conflicts of interests. The former attracts the largest number of potential buyers and a well known result from auction theory says that adding a bidder is always beneficial for the seller, because it increases the competition between the buyers (Bulow and Klemperer, 1996). This idea is endorsed by the Supreme Court of the US which clearly stated that “the best way to determine value is exposure to a market”<sup>22</sup> and also in the less formal state procedures ABCs in the US a public auction is mandatory.

However, this positive effect could be more than offset in those industries where exposing the business to the market is particularly likely to undermine the value of assets. We would then expect to find evidence of pre-packs being executed in industries where the ‘evaporation’ risk is highest and we would not then expect a

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<sup>21</sup> Thorburn (2000) shows that auction pre-packs in Sweden are associated with lower direct bankruptcy costs.

<sup>22</sup> Bank of America National Trust & Savings Association v. 203 N. LaSalle Street Partnership, 526 U.S. 434 (1999). Povel and Singh (2006) are very critical of these mechanisms. They claim that, due to informational asymmetries between insiders and outsiders, ‘market tests’ are suboptimal and auctions should be biased against insiders.

lower performance of pre-packs in comparison to other procedures in terms of either recovery rate or post-bankruptcy refiling probabilities.

Furthermore, in connected sales, the IP presumably does not regard the existing management as the source of the firm's problem.<sup>23</sup> Therefore, the private negotiation before the sale reveals that the owner-manager is either the higher bidder or the only one.<sup>24</sup> Hence our second hypothesis:

*H2: The performance of pre-packs and, in particular of pre-packs to connected parties, is not different from the performance of other bankruptcy procedures.*

As we said, according to the advocates of pre-packs, the speed and the discretion of the process are its greatest virtues. However, the associated lack of transparency makes this procedure vulnerable to abuses. Since in pre-packs the unsecured creditors are presented with a *fait accompli* on which they have no voice<sup>25</sup> and the legal framework does not include any control of the IPs' actions, serious concerns have been raised about potential conflicts of interest, in particular when the business is sold to a connected party. According to Stromberg (2000), whenever a sale-back decision occurs, there will, in principle, be a deviation from absolute priority despite the fact that the absolute priority rule (APR) is formally upheld: owner-managers and banks share some going-concern surplus at the expense of unsecured creditors. This is potentially a serious problem in a context characterized by absence of court involvement and independent assessment of the IP (this is the case both in the UK pre-packs and in the US ABCs).

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<sup>23</sup> Furthermore, according to Stromberg (2000) sale-backs in Sweden are most common when the market for firm's assets is illiquid, such as during a recession. Sale-backs are then used to avoid the inefficiency of mandatory auctions: they tend to produce fire sale prices since the bankrupt firm's financial condition tends to be correlated with the financial condition of the potential buyers in the same industry (Shleifer and Vishny, 1992).

<sup>24</sup> Furthermore, most small business loans require the owner to personally guarantee the corporation's debt. In these cases and in the absence of external potential buyers, the owner will bid at a price that is much higher than the liquidation value to avoid the main bank forcing him into personal bankruptcy or, in the words of an IP "because if they don't they're still going to pay out under a guarantee, so they might as well get something back for their money" (cited by Frisby (2006)).

<sup>25</sup> Creditors are also not consulted in more than three quarters of non-prepack sales in administration (Frisby, 2007). This is not only a UK phenomenon: a US study shows that in small Chapter 11 cases (debt less than \$ 2 million) creditor's committees are only formed in 3% of cases (Morrison, 2007).

These features of the institutional system are not a concern when the secured creditor is out-of-the money. Reputational concerns of the IP, who is interested in pleasing the bank in order to be hired again in the future, should be strong enough to ensure maximization of proceedings. On the other hand, when the secured creditor is going to be paid in full, reputational concerns are no longer a strong disciplining device. The residual claimants here are the unsecured creditors about whom the IPs have no reputational concerns. Unsecured creditors are neither the appointers of the IPs nor repeat players in bankruptcy. If there is anything left, after the payment to the bank, this could be appropriated by the owner-manager or by the IP.

However big diversified accounting companies for which a recovery service is one among the many services offered to their clients could be less inclined to engage in “contested” transactions because bad media coverage in recovery services could spill-over to the other services they offer<sup>26</sup>. This would not be true for small companies which are specialized in recovery services and less worried about spillovers.

*H3: Pre-packs, and in particular pre-packs to connected parties, are characterized by the expropriation of unsecured creditors due to the conflict of interests between owner-managers and IPs and unsecured creditors.*

A further concern about pre-packs to connected parties, apart from the potential conflict of interests, is that they may occur at the expense of informal workouts. Instead of paying the costs of the restructuring themselves banks force the unsecured creditors to pay for them in a pre-pack. To shed light on this issue we need to go back to the question of why pre-packs emerged in the first place.

Armour (2011) dismisses the hypothesis that the increase of pre-packs is due to the change in the law after to the introduction of the Enterprise Act of 2002. Instead, he argues that the emergence of this new business practice is linked to corporate financial structure developments. Traditionally, the debt structure of UK firms has been very concentrated. Publicly listed companies relied on syndicated loans and privately-held companies on a single bank. This pattern which was slowly changing

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<sup>26</sup> See Greenwood et al. (2005) for a discussion of reputation and diversification in professional service firms.

during the previous decade altered significantly at the beginning of the 2000s. Bigger companies started to obtain funds from the bond markets and took advantage of the cheaper credit provided by the growth of securitization and the secondary markets for corporate loans. On the other hand, smaller companies saw their capital structure becoming more and more fragmented because of the increasing recourse to asset-based finance, namely lease financing and invoice discounting.

The increase in the complexity of capital structure is directly associated with greater impediments to execute an out-of-court restructuring because of the presence of holdout problems and conflicts of interests between different layers of creditors (Gertner and Sharfstein, 1991).

According to Tashjian, Lease and McConnel (1996), it was after the introduction of legal rulings that discouraged out-of-court restructurings that pre-packs in the US became more widely used in the early 1990s and started to replace informal workouts. Something along the same lines might have happened in the UK at the beginning of the 2000s. The comprehension of the origin of pre-packs leads to the last hypothesis.

*H4: Given the increasing complexity of organizing workouts, piecemeal liquidations would have become more widespread without pre-packs in small companies where intangibles, reputations and employee retention are particularly important.*

## **4 Data**

We draw on a database of UK insolvency procedures compiled by Frisby (2006, 2007) for the Insolvency Service. The database consists of a randomly selected sample of around one third of the population of administrations and receiverships. All companies entering into either administration or receivership were initially identified from the index of insolvency appointments published in the *London Gazette*. Then, these were randomly sampled and data on the selected cases was collected from the reports filed at Companies House by the IPs<sup>27</sup>.

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<sup>27</sup> For each case, the Insolvency Package consists of notices of appointment, statement of affairs, statement of proposals (for administration), receiver's reports to creditors, progress reports (for administrators), abstract of receipts and payments, notices of extension (for administrations) and



The database records, when available, the following information: company's name, SIC code, location of the company, year of incorporation, procedure (administration or receivership), practitioner identity (name and firm), start and end dates of the procedure, amount of secured, preferential and unsecured debt owed at the beginning of the procedure and payments made respectively to secured, preferential and unsecured creditors during the procedure, the outcome of the procedure (reorganization, going concern sale or piecemeal liquidation). Moreover, for the subsample of going concern sales additional information is recorded. For each going concern sale the database includes information (when available) on the type of sale (pre-pack or normal business sale)<sup>28</sup>, the date of the sale, the identity of the purchaser, whether the purchaser is a connected party<sup>29</sup>, whether a marketing activity has been conducted before the sale, and whether a valuation of the business occurred<sup>30</sup>. Finally, the author of the database includes also information on the survival of the business: she verifies whether the purchaser has entered into a new insolvency procedure between the date of the purchase and early 2010<sup>31</sup>.

[Figure 1 about here]

From Figure 1 we can see how the business practices of pre-packs and pre-packs to connected parties as percentages of total insolvencies have increased since early 2002. We analyze all the administrations and receiverships filed from 16 September 2003 to 16 September 2004<sup>32</sup>. We obtain a sample of 1087 cases. We drop cases where we have missing information on the incorporation date (8 cases), on the

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notices of vacation of office. Where liquidation followed either receivership or administration, these documents are used to obtain information on payments to unsecured creditors.

<sup>28</sup> A sale is identified as a pre-pack when the practitioner's report states that the sale of the business has been pre-negotiated and executed immediately after the appointment.

<sup>29</sup> A connected party is either the owner or a director or a manager.

<sup>30</sup> If the IP's report does not mention any marketing activity or valuation exercise, it is assumed that no marketing or valuation had occurred. The marketing and valuation information seems too vague to be employed in the study.

<sup>31</sup> To construct this last variable and to include the total amount of payments to unsecured creditors (which can be calculated only at the very end of the procedure) a roll-out of the database was conducted at the beginning of 2010. Although the meaningful economic outcome (going concern sale, piecemeal liquidation) happens very quickly after the appointment, the closure of the procedure (which is required to collect all the claims owned by the filing firm) can take several years.

<sup>32</sup> For comparability concerns we start the sample after the coming into force of the Enterprise Act (16 September 2003), after this date the HMRC (the government department responsible for tax collection) loses his preferential status and becomes an unsecured creditor.

payments to different class of creditors (221 cases) and on the SIC code (38 cases)<sup>33</sup>. After applying this second filter we are left with 820 cases.

We extend the original database including information on industry characteristics<sup>34</sup> obtained from Fame (for each variable of interest, i.e. intangibles over total assets, we associate with each company in the sample the median value of the companies in the same 2-digit code industry<sup>35</sup>) and credit scores data from Experian on individual companies before entering into insolvency. We winsorize the following variables, to ensure that outliers do not distort our results: recovery rate, recovery rate to the secured creditors, recovery rate to the unsecured creditors, secured debt and unsecured debt as a percentage of total debt, size, age. All data below the 1st percentile are set to the 1st percentile, and data above the 99th percentile are set to the 99th percentile.

The companies have an average book value of debt owed at the beginning of the procedure of £2.6 million and a median value of £0.8m<sup>36</sup>. The average life of the companies is 13 years with a median value of 8. The sample includes 241 receiverships and 579 administrations<sup>37</sup>. In table 1 we look at the outcomes of the insolvency. Reorganization, which was supposed to be the first outcome in the hierarchy of the new administration is used in only 1% of cases<sup>38</sup>. We observe that in more than 40% of cases an insolvency procedure in the UK implies the preservation of the business through a going concern sale. One out of two sales is to a connected

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<sup>33</sup> In some cases the absence of information regarding payments to different class of creditors is due to the fact that the procedure is still ongoing; in other cases this is due to gaps in the information provided in the practitioner's reports.

<sup>34</sup> Ideally we would have collected information at firm level. The firm level information can come either from the document compiled by the IP after the appointment or from the last accounts available from Fame. However, we prefer using industry level information because the data produced by the IP could be biased because of the potential conflict of interest of the IP and, on the other hand, the accounting information for most of these small companies in Fame is incomplete (Fame often reports only the amount of the assets, the amount of debt and in some cases the profit figure).

<sup>35</sup> Companies in the sample span around 60 different 2-digit code industries.

<sup>36</sup> This is quite similar to the Thorburn (2000)'s database of Swedish firms where the median book value of assets is 1.3 million dollars.

<sup>37</sup> Our sample starts after the coming into force of the Enterprise Act 2002 which abolishes receiverships for floating charges created after 15 September 2003. Despite the fact the holders of pre-Act security had the option of appointing a receiver there was a substantial decline of receiverships and a large increase in administrations (Armour et al., 2012)

<sup>38</sup> One of the main obstacle to company reorganizations is the inability to grant super-priority to new financing during the procedure (DIP funding), which means that the company is highly unlikely to survive because of lack of funding.

party and around 40% of the sales are pre-packed<sup>39</sup>. The sample of going concern sales on which we calculate the percentages of sales to connected parties and pre-packs is smaller (271 cases) than the original number of cases defined as going concern sales (341 cases). This is due to the fact that in some of these cases the IP reports were incomplete - they just state that there was a sale without giving further information. It must be emphasized here that such reports are provided with the purpose of informing the creditors on matters that the IPs consider will be of interest to them. Clearly the floating charge-holder does not rely on this source of information (no decision is taken by the IP without his consent) but it can be the only source of accountability for unsecured creditors<sup>40</sup>. For this reason we will take account of this when we look at the evidence on the conflict of interests.

[Table 1 about here]

## 5 Results

### 5.1 The Choice of a Pre-Pack to a Connected party

In this section we test the first hypothesis, trying to establish in which cases the IPs decide to execute pre-packs to connected parties.

We first compare firm characteristics at entry to the procedure (size, percentage of secured debt, absence of secured debt, age and a group of industry level characteristics) and then confirm these results in a multivariate regression. We start by comparing sales to connected and non connected parties. The two groups, although similar in most respects, have a striking difference in terms of size. Sales to connected parties are almost half the size, as proxied by the size of total debt, of companies sold to outsiders. This difference is not observed in Sweden (Stromberg, 2000). The average size of liabilities for non-connected sales is £3.1 million against £1.7 million for the connected sales (Part A of Table 2).

[Table 2 about here]

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<sup>39</sup> From Thorburn (2000) and Eckbo and Thorburn (2000) we know that in Sweden the figures in terms of outcomes are the following: 25% piecemeal liquidations and 75% going concern sales, whose 54% pre-packs and 27% sale-backs. Their sample goes back to the period 1988-1991.

<sup>40</sup> Frisby (2007) mentions the possibility that important information, which is not present in the IPs' reports, could have been provided elsewhere to creditors, perhaps in creditor's meetings or in other correspondence

If we consider only the subsample of connected sales (133 cases) and we compare the pre-packaged sales with the non pre-packaged ones we can single out the effect of pre-packaging. As predicted by the theory and stressed by the practitioners, we do observe pre-packs where the ‘evaporation risk’ is higher: pre-packs are associated with industries where the intangibles on total assets are higher (considered as a proxy for the importance of reputation), the proportion of fixed assets is lower, the turnover on total assets (as a measure of capital intensity) is higher and the total assets per employee are lower. These results are consistent with H1. Furthermore, we find that pre-packs are associated with industries where the solvency ratio is lower: if the IP knows that an industry is in distress an open market offer will probably be ruled out and the owner is likely to be the only buyer. On the other hand, if the industry is healthy, attracting the largest number of competitors through a public auction may be beneficial (Part B of Table 2)<sup>41</sup>.

Finally we run a Probit regression with robust standard errors to confirm these results in a multivariate regression framework (Table 3). The dependent variable is a dummy equal to one if the insolvency is a pre-pack to a connected party. The sample is the total number of going concern sales for which we have information on the type of sale. We can confirm the univariate results: pre-packs to connected parties are smaller and are associated with industries with a lower solvency ratio, less fixed assets and higher labour/capital ratio. In unreported regressions, we run the same Probit model but we use as a dependent variable a dummy equal to one if the insolvency is a pre-pack (both to connected and non connected parties). As expected we find that sales are, in general, pre-packaged in industries with less fixed assets and higher labour/capital ratio.

[Table 3 about here]

## **5.2 Performance: Recovery and Survival Rate**

In this section we will look at pre-packs and pre-packs to connected parties in terms of their performance in comparison with alternative insolvency procedures. In the all sample the average general recovery rate is 19%, while the secured recovery

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<sup>41</sup> If, on the other hand, we consider only the subsample of non connected sales (138 cases) and we compare the pre-packaged sales with the non pre-packaged ones we find that the differences in the main variables Industry fixed assets on total assets, Industry intangible on total assets and Industry total assets per employee have the same sign but are not statistically significant.

rate is 54%. As we can see in Panel A of Table 4, going concern sales, reflecting the premium of continuing operating the firm with all its assets intact, are associated with a recovery rate of 25% while piecemeal liquidations with a lower 16% (the figures for secured recovery rate are respectively 61% and 48%)<sup>42</sup>. Unsecured creditors obtain an average of only 4%. From these figures, we understand how strong is the incentive for the secured creditors to organize a sale of the business and avoid the piecemeal liquidation.

If Panel B of Table 4 we look only at the sample of going concern sales for which we have info on the type of sale. We compare recovery rates for pre-packs to connected parties and the rest of the sales and we cannot find any statistical difference.

[Table 4 about here]

In Table 5 we confirm this last result in a multivariate regression. We run regressions using as a dependent variable general recovery rate (models 1 and 2), secured recovery rate (models 3 and 4) and unsecured recovery rate (models 5 and 6). In the first four models we run OLS regressions while in the last two we run Tobit regressions, in all cases we calculate robust standard errors. We regress the dependent variables on a dummy variable which is equal to one if the procedure is a pre-pack to a connected party plus additional firm and procedure specific characteristics. The dummy variable Pre-pack to a connected party never enters the regressions significantly. On the other hand, connected sales and pre-packs seem to be associated with lower unsecured creditor returns. However, a clinical analysis shows that these two dummy variables are significant due to the presence of one outlier. If we exclude this one case the two variables lose any explanatory power<sup>43</sup>. We find also that companies with a longer history and in industries with a higher presence of fixed assets in the balance sheet are associated with higher recovery.

[Table 5 about here]

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<sup>42</sup> Although international comparisons must be made with caution, it is interesting to note that figures for general recovery rates in Sweden are higher: the average is 35%, 39% in going concern sales and 27% in piecemeal liquidations (Eckbo and Thorburn, 2009).

<sup>43</sup> The outlier is PST International Ltd which enters into insolvency on the 27<sup>th</sup> of May 2004. At the end of the procedure the secured creditor is not paid in full and the unsecured creditors get around 70% of what he was due at the beginning of the procedure. This is absolutely unusual in the UK. This is case of a non pre-packaged sale to an outsider. This is absolutely unusual in the UK.

The dummy variable Pre-pack to connected party (D) is not an exogenous regressor since this is the outcome of a choice taken by the IP. In order to control for the fact that selectivity may bias the OLS estimate of the coefficient of D, we apply two different methodologies. In Table 6 we use the Heckman methodology (1979). In the first step we model the choice of connected pre-pack using the first Probit model of Table 3 and in the second step we regress the recovery rate on the predicted values of the connected pre-pack. In Table 6 we observe that this last variable and the Inverse Mills Ratio are not significant showing that the selection effect is not biasing our results.

[Table 6 about here]

To confirm this result we apply also the Propensity Score Matching method. The idea is to estimate the counterfactual outcomes of individuals by using the outcomes from a subsample of “similar” subjects from the control group (Imbens, 2004). In our case we want to compare the pre-packs to connected parties with those sales which are more similar according to the variables that we are able to observe. We estimate the propensity score as the probability of being a pre-pack to a connected party conditional on the covariates through a Logit regression. With the list of covariates that we use in the estimation we are able to satisfy the balancing property, by which observations with the same propensity score have the same distribution of observable covariates independently of treatment status. We then estimate the Average Treatment Effects for the Treated (pre-packs to connected parties) given the propensity score using the Neighbor matching technique.<sup>44</sup> The results in table 7 confirm our results: the recovery rates of pre-packs to connected parties are not significantly different from those obtained in other sales.

[Table 7 about here]

Finally we look at survival rate. We use a variable that is equal to one if the purchaser of the business does not file for bankruptcy in the time period between the date of the sale and early 2010. Comparing the means between cases of pre-packs to connected parties and the rest of the sales we find that the survival rate of the latter group is higher (0.46 vs. 0.41) but this difference is not statistically significant (Panel B of Table 4). This result is confirmed if we control for other variables in a Probit

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<sup>44</sup> Results do not change if we use different matching techniques as Radius or Kernel.

regression with robust standard errors with the survival rate as a dependent variable (Table 8). The dummy variable Pre-pack to connected parties is not significant. This seems at odds with the view of those who criticize this insolvency tool in the media who suggest that that corrupt directors repeatedly use this bankruptcy mechanism. It is interesting to note that Age has a positive impact on the survival rate.

[Table 8 about here]

In conclusion, we find that the floating charge-holder has a very high incentive to sell the business as a going concern. Secured recovery rate is much higher in cases of going concern sales in comparison to piecemeal liquidation. The IP, under the control of the floating charge holder, in some circumstances finds that selling the business back to the owner in a pre-pack is the best solution to maximize recovery. We do not find any difference in terms of recovery rate in these cases even controlling for selection effects. Also the refiling rates of these cases are similar to those of alternative procedures implying that the floating charge-holder is good at distinguishing viable from non viable businesses.<sup>45</sup> These results are consistent with H2.

### 5.3 Conflict of Interests

In this section we test the third hypothesis regarding the potential exploitation of conflict of interests in cases of pre-packs and, in particular, pre-packs to connected parties. As noted above, conflicts of interest should be restricted to cases where the secured creditor is repaid in full. The empirical strategy employed is therefore to explore the subsample when the bank is paid in full. If there is a problem of expropriation of unsecured creditors due to lack of transparency we should observe a lower level of unsecured recovery rate in cases of pre-packs and especially pre-packs to connected parties than in other procedures.

Considering the sample where the bank is paid in full<sup>46</sup> (84) within the sample of going concerns sales for which we have information about the type of sale (271), we observe that the average recovery rate for unsecured creditors is 6% in the all sample,

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<sup>45</sup> On the contrary, Eckbo and Thorburn (2008) finds that in Sweden refiling rate decreases with pre-packs and increases with the sale to outsiders

<sup>46</sup> We consider that the bank is paid in full if the secured recovery rate is higher than 95%.

4.3% in pre-packs and 4% in pre-packs to connected parties<sup>47</sup>. In Figure 2 we show that the distribution of unsecured returns when the bank is paid in full in pre-packs to connected parties and in other sales is not distinguishable.

[Figure 2 about here]

We run Tobit regression with bootstrapped standard errors with the recovery to the unsecured creditors as a dependent variable to confirm these results. As we can see from Table 8, the variable Pre-pack to connected parties and the variable Pre-pack are not significantly associated with lower returns to unsecured creditors.<sup>48</sup> As we predicted the variable Big4 has the expected positive sign but, again this is not significant. We find that the higher is the probability of default at the end of 2003, which is a proxy for the intrinsic quality of the business before entering into insolvency, the lower are the returns to unsecured creditors when the bank is paid in full. We control for industry effects, size, age, percentage of secured debt and other characteristics of the insolvency procedure.

[Table 9 about here]

As we mentioned in the previous session, to be sure that the cases where we do not have information on the type of sale are not related to conflict of interest we use as a regressor Going concern sales where we have no info on the type of sale instead of Pre-packs. In unreported regressions, the coefficient is not significant thereby rejecting the hypothesis that the absence of information is due to the desire of the IP to be unaccountable to the unsecured creditors in cases where they are in the money.

We then compare the percentage of cases where the bank is paid in full in different type of sales. We observe that the percentage of cases where the bank is paid in full is higher in pre-packs to connected parties (54%) compared to the rest of the sales (38%) but when in Table 10 we control for other variables this difference is not significant anymore. In pre-packs, sales to connected parties and pre-packs to connected parties the bank is not paid in full more often than it is in other sales.

Also in this setting we check that the cases where we have no info on the type of sale are not associated with a relatively higher number of cases where the bank is paid

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<sup>47</sup> This result is by no means specific to the UK system. In the US in Chapter 7 the average payoff to unsecured creditors is about 1%. In small businesses Chapter 11, which are not dismissed or converted in Chapter 7, the payoff to unsecured creditors is zero in about 40% of cases and less than ten percent overall (Bris, Welch & Zhu, 2006).

<sup>48</sup> The same results are obtained if we do not bootstrap the standard errors.



in full. They would look suspicious if this was indeed the case. Again, in unreported regressions we find the opposite: cases where the IP documents do not report information on the sale are cases where the bank is rarely paid in full.

[Table 10 about here]

We have shown that the unsecured creditors receive very little in all type of sales but what if in connected pre-packs they should have received much more? In order to verify this concern we split the sample of going concern sales where the bank is paid in full and where the bank is not paid in full in Table 11. We observe that in the former sample pre-packs to connected parties are associated with companies with a lower instead of a higher intrinsic quality, as proxied by the last credit score (which is calculated as the probability of default) before entering into insolvency. Moreover, also in these subsample we find that pre-packs to connected parties are associated with industries where the role of reputation, intangibles and employees is more important suggesting that also in this subsample they are used to maximize recovery<sup>49</sup>.

[Table 11 about here]

We therefore reject the third hypothesis. The returns to unsecured creditors in the UK are low, even when the bank is paid in full, but returns in pre-packs and pre-packs to connected parties are in line with those obtained under alternative insolvency procedures. The bank is not paid in full more often in pre-packs to connected parties and given the relatively poorer financial condition of these businesses we exclude that other type of sales would have produced a higher payoff to unsecured creditors<sup>50</sup>. The floating-charge holder who selects and supervises the IP has no interest in tolerating the exploitation of conflicts of interest and could see its reputation damaged by being associated with a “contested” transaction.

#### **5.4 Alternative to Piecemeal Liquidation?**

In the last part of the empirical analysis we want to shed light on a further concern about pre-packs to connected parties. Banks may use them in circumstances in which, absent this insolvency tool, they would have restructured the debt in an informal

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<sup>49</sup> The significance levels are lower because of the significantly smaller sample.

<sup>50</sup> A possible objection to this is that unsecured creditors, knowing ex-ante that some companies are more likely to execute a connected pre-pack in case of insolvency, reduce their exposure to them. This seems inconsistent with the fact that this creditor business practice is a very recent phenomenon and that the level of unsecured debt on total debt owned at the beginning of the procedure in cases of connected pre-packs is not statistically different from that in other going concern sales.

workout. As we discussed in the theory section, according to Armour (2011) restructuring a small company informally has become increasingly difficult because of the fragmentation of capital structure arising from greater recourse to asset-based finance, namely finance leasing and invoice discounting.

In cases of pre-packs to connected parties, banks face a situation in which small companies are in financial distress, where the trust relationship with the owner has not been damaged, other potential buyers either do not exist or if they exist they would offer a lower price for the business, the value of the company would quickly collapse in the event of revelation of distress to the market. In these cases banks find it convenient to organize a pre-packaged sale-back of the business. Given the difficulty of reorganizing the business informally, probably the only alternative would be a piecemeal liquidation (which would reduce the recovery for the bank and for society as a whole). The evidence that we report in Table 12 seems to give support to this line of reasoning. It confirms that the recovery rate (in general and for secured creditors) in pre-packs to connected parties is much larger than in piecemeal liquidation but, above all, it shows that the ex-ante features, in terms of size and industry characteristics, of the two sub-samples are similar. However, there are two differences between the two groups. The first difference is the role of the secured creditors in the capital structure. In cases of liquidation there is much less secured debt than in pre-packs. Clearly, the chance of organizing a pre-packaged sale of the business is connected with the presence of a floating charge-holder and its associated incentives and powers. The second difference is that pre-packs to connected parties are associated to even more human-capital-intensive industries. Since Wang (2009) reports that high human-capital-intensive firms are associated with higher liquidation rates in bankruptcy, this evidence reinforces the hypothesis that, absent this tool, these companies would probably be liquidated.

[Table 12 about here]

Summing up, the empirical evidence gives support to H4: it seems to suggest that pre-pack sales to connected parties may be used as a mechanism of avoiding unwarranted liquidations.<sup>51</sup>

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<sup>51</sup> Eckbo and Thorburn (2008) suggest that in Sweden, auction pre-packs may be used to pre-empt liquidations when the auction is expected to be illiquid. They conclude this on the basis that prices in pre-pack auctions are lower than in auction going concern sales.

## 6 Conclusions

The control exercised by secured creditors can have two significant effects on the resolution of distress in small businesses. It can reduce the ex post costs of financial distress but it may also create an opportunity for secured creditors and business owners to collude in order to divert value from junior creditors. Serious concerns have been raised about potential conflicts of interest, in particular when the business is sold to a connected party, in the context of US state procedures under which a large percentage of small businesses are restructured (Morrison, 2009).

The UK pre-packs offer an extreme version of this trade-off: a pre-pack minimizes the costs, removing all the restrictions to achieve a quick sale, but also maximizes the risk of collusion. Here the insolvency practitioner, appointed by the secured creditor, can sell a company without involving the court or consulting with junior creditors. In the UK there is not even a legal requirement of conducting a public auction as in the US. Having access to a database of insolvency in the UK and, in particular, to data on the secured and unsecured debt recovery rates we are in a unique position to empirically assess this trade-off and analyse the distributional concerns.

Contrary to the widespread criticism related to the lack of transparency that pre-packs, and in particular pre-packs to connected parties, involve, we find no evidence of exploitation of conflict of interests by the insolvency practitioner under the direction of the floating charge holder. These procedures seem to be used to preserve the value of the business: the sales to a connected party are pre-packaged in cases where the significance of intangibles, reputation and employees is particularly great. In these circumstances, exposing the firm to the market would lead to the value of the business evaporating. We observe that these “contested” transactions do not have a poorer recovery rate or refiling rate than alternative procedures. Finally we find that, given the size and the industry characteristics of these companies, absent this insolvency tool, they would probably be liquidated piecemeal with a destruction of value for creditors and society.

The alleged costs of collusion between secured creditors and owners to divert value from junior creditors seem not to be large. In small businesses where secured creditors are concentrated the benefits of their control seem to outweigh the costs.

This provides a benchmark for evaluating likely effects of the secured creditor control in resolution of small businesses also in other countries.

Moreover, the findings of this paper shed further light on the “alleged” pro-liquidation bias in creditor controlled systems. Franks and Sussman (2005) already established that in the U.K. the floating charge works well: there are no inefficient runs and UK banks do not appear to opt for automatic liquidation upon violation of debt covenants but try to rescue the company. Here we show that, once in bankruptcy, floating charge holders have a strong incentive to sell the business as a going concern as soon as possible instead of selling it piecemeal in order to maximize their own recovery. The incentives to do so are so strong that they introduced pre-packs and in particular pre-packs to connected parties to facilitate this. The fewer the restrictions imposed on the floating charge holder (in terms of judicial review, requirements to obtain the consent of the dispersed unsecured creditors) the quicker the business can be sold, the higher the value that can be obtained, and the more businesses can be preserved as going concerns. This empirical evidence confirms the theoretical results of Gennaioli and Rossi (2009) about the efficiency of the floating charge as a resolution mechanism in countries with strong investor protection. Further research should provide empirical evidence on what kind of inefficiencies are associated with floating charges in countries with low investor protection.

The paper makes also a contribution to the literature on auction design in bankruptcy (Bhattacharyya and Singh, 1999). Section 363 in the US and mandatory auctions in Sweden are both based on the assumption that exposure to market tests through standard auctions is the best way of maximizing recovery. Here we suggest a reason for why the bankruptcy trustee should be able to design the auction mechanism freely: in some circumstances the same act of exposing the company to the market test would destroy value and a private negotiation can achieve a superior outcome to a public auction. However, allowing for private negotiations makes the bankruptcy procedure more vulnerable to abuse. In the UK the potential conflict of interest is addressed by placing the bankruptcy trustee under the direction of the floating-charge holder.

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### Table 1 Outcomes in the UK Insolvency

This Table reports the outcomes of UK insolvency procedures from 16 September 2003 to 16 September 2004. The sample of going concern sales on which we calculate the percentages of sales to connected parties and pre-packs is smaller (271 cases) than the original number of cases defined as going concern sales (341 cases). This is due to the fact that in some of these cases the IP reports were incomplete. The first table reports the procedures by type of insolvency (receivership vs. administration). In the second table we tabulate the 271 going concern sales by prepack/non-prepack and by identity of the buyer. In parenthesis we report the percentage out of the total going concern sales.

	Overall UK	Receivership	Administration
Reorganization	0.73%	0%	1.04%
Piecemeal liquidation	57.68%	52.70%	59.76%
Going concern sale	41.59%	47.30%	39.21%
Sample	820	241	579

Among the sample of going concern sales			
Sale to a connected party	49.08%	45.45%	50.82%
Pre-packs	39.85%	44.32%	37.70%

	Non pre-pack	Pre-pack
Sale to an outsider	91 (34%)	47 (17%)
Sale to a connected party	72 (27%)	61 (23%)

**Table 2 Comparison of Firm and Industry Characteristics by Insolvency Outcome**

This table reports univariate statistics of a comparison of connected and non-connected sales within the sample of going concern sales (Panel A) and between pre-pack and non pre-pack sales within the sample of connected sales (Panel B). *Total debt* is the amount of total debt owned at the beginning of the procedure. *Probability of default* is the likelihood of default calculated by Experian for the last available accounts (2003). *Secured* is the percentage of secured to total debt at the beginning of the procedure. *Age* is the age of the firm from incorporation to the entry into insolvency. *Absence of secured debt* is a dummy variable equal to 1 if the firm has no secured debt at entry into the procedure. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*,\*\* and \*\*\*, respectively. T-statistics are reported in parentheses.

**Panel A. Connected vs. Non Connected Sales**

	Non connected sale		Connected sale		Diff.	
	Mean	Median	Mean	Median		
Total debt	3100127	1229766	1675903	772571	1424223.4***	(2.96)
Probability of default	0.037	0.027	0.033	0.025	0.003	(0.89)
Secured	0.423	0.418	0.358	0.347	0.065*	(1.93)
Age	12.620	7.010	12.729	8.841	-0.11	(-0.07)
Absence of secured debt	0.094	0	0.113	0	-0.019	(-0.50)
Industry solvency ratio	34.260	32.785	34.122	32.785	0.138	(0.22)
Industry turnover on total assets	1.823	1.869	1.834	1.869	-0.011	(-0.23)
Industry fixed assets on total assets	0.286	0.25	0.287	0.25	-0.001	(-0.07)
Industry plants and mach. on total assets	0.057	0.023	0.062	0.036	-0.006	(-0.64)
Industry intangibles on total assets	0.157	0.147	0.153	0.147	0.004	(0.35)
Industry total assets per employee	62391.59	55462	61572.25	54773	819.3	(0.36)
Observations	138		133		271	

**Panel B. Pre-pack vs. Non-Pre-Pack Connected Sales**

	Non-pre-pack connected sale		Pre-pack connected sale		Diff.	
	Mean	Median	Mean	Median		
Total debt	1873306	779343.5	1442903	747186	430402.5	(0.78)
Probability of default	0.030	0.023	0.038	0.028	-0.010*	(-1.70)
Secured	0.344	0.310	0.376	0.350	-0.032	(-0.73)
Age	13.310	9.667	12.044	8.591	1.265	(0.56)
Absence of secured debt	0.139	0	0.082	0	0.057	(1.03)
Industry solvency ratio	35.001	36.03	33.085	32.785	1.916**	(2.25)
Industry turnover on total assets	1.748	1.721	1.936	1.869	-0.188***	(-2.64)
Industry fixed assets on total assets	0.312	0.281	0.257	0.218	0.055**	(2.35)
Industry plants and mach. on total assets	0.070	0.051	0.054	0.023	0.015	(1.21)
Industry intangibles on total assets	0.143	0.102	0.166	0.162	-0.024*	(-1.68)
Industry total assets per employee	64293.38	56344.5	58360.42	54773	5933.0*	(1.76)
Observations	72		61		133	

**Table 3 The Choice of Executing a Pre-Pack to a Connected Party**

This table reports the results of Probit regressions with robust standard errors with a dummy variable equal to one if the insolvency is a pre-pack to a connected party as dependent variable. *Probability of default* is the likelihood of default calculated by Experian from the last available accounts (2003). *Age* is the age of the firm from incorporation to the entry into insolvency. *Size* is the log of the amount of total debt owed at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Receivership* is a dummy variable equal to 1 if the insolvency procedure is receivership, is equal to 0 if it is administration. *Court* is a dummy variable equal to 1 if the entry into administration is through a court order. *Unsecured* is the percentage of unsecured debt of the total debt owed at the beginning of the procedure. *Absence of secured debt* is a dummy variable equal to 1 if the firm has no secured debt at the entry of the procedure. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. The sample consists of the cases of going concern sales. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*, \*\* and \*\*\*, respectively. We report the estimated marginal effects at the mean. T-statistics are reported in parentheses.

	(1) Pre-pack to a connected party	(2) Pre-pack to a connected party
Probability of default	1.115 (1.20)	1.154 (1.26)
Age	0.001 (0.64)	0.002 (0.74)
Size	-0.050** (-2.18)	-0.057** (-2.20)
Industry fixed on total assets	-0.651*** (-2.82)	-0.632*** (-2.69)
Industry total assets per employee	-0.000** (-2.27)	-0.000** (-2.35)
Industry solvency ratio	-0.010* (-1.89)	-0.011* (-1.93)
Absence of secured debt		-0.103 (-1.44)
Court		-0.097* (-1.68)
Big 4		0.060 (0.69)
Receivership		-0.024 (-0.37)
Unsecured debt		0.0423 (0.34)
<i>N</i>	232	232
chi2	21.70	27.52
P	0.001	0.004

#### Table 4 Comparison of Recovery Rate and Survival Rate by Insolvency Outcome

This table reports univariate statistics of the comparison between piecemeal liquidation and going concern sales (Panel A) and between pre-packs to connected parties and the rest of the sales (Panel B). The variables are: *Unsecured recovery rate*, *Secured recovery rate*, *Recovery rate* and *Survival* (a dummy variable equal to one if the purchaser of the business does not file for bankruptcy in the time period between the date of the sale and early 2010). The total numbers of observations is higher than the sum of the observations in the first two columns because in some cases there is no secured or unsecured debt. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*,\*\* and \*\*\*, respectively. T-statistics are reported in parentheses.

##### Panel A. Piecemeal Liquidations and Going Concern Sales

	Piecemeal Liquidation		Going concern sale		Diff.	
	Mean	Median	Mean	Median		
Unsecured recovery rate	0.042	0	0.037	0	0.005	(0.55)
Secured recovery rate	0.476	0.375	0.610	0.704	-0.134***	(-4.23)
Recovery rate	0.156	0.083	0.246	0.199	-0.090***	(-6.02)
Observations	473		341		814	

##### Panel B. Pre-Packs to Connected Parties and the Rest of the Sales for Which we Have Info on the Type of Sale

	Rest of the sales		Pre-packs to connected parties		Diff.	
	Mean	Median	Mean	Median		
Unsecured recovery rate	0.042	0	0.034	0	0.008	(0.49)
Secured recovery rate	0.627	0.7	0.672	1	-0.045	(-0.76)
Recovery rate	0.261	0.224	0.246	0.206	0.015	(-0.46)
Survival	0.457	0	0.41	0	0.047	(0.65)
Observations	210		61		271	

**Table 5 Determinants of Recovery Rate**

This table reports results of regressions with robust standard errors using as a dependent variable general recovery rate, secured recovery rate, unsecured recovery rate. The first four models are OLS regressions while the last two are Tobit regressions. *Pre-pack to connected party* is a dummy variable which is equal to 1 if the pre-packed sale is to a connected party. *Sale to a connected party* is a dummy variable equal to 1 if the sale is to a connected party. *Pre-pack* is a dummy variable equal to 1 if the sale is pre-packaged. *Probability of default* is the likelihood of default calculated by Experian from the last available accounts (2003). *Age* is the age of the firm from incorporation to the entry into insolvency. *Size* is the log of the amount of total debt owed at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Administration* is a dummy variable equal to 1 if the insolvency procedure is administration, is equal to 0 if it is receivership. *Court order* is a dummy variable equal to 1 if the entry into administration is through a court order. *Secured* is the percentage of secured debt out of the total debt owed at the beginning of the procedure. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. The sample consists of going concerns sales. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*, \*\* and \*\*\*, respectively. We report the estimated marginal effects at the mean for the last two models. T-statistics are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
	Recovery rate	Recovery rate	Secured recovery rate	Secured recovery rate	Unsecured recovery rate	Unsecured recovery rate
Pre-pack to a connected party	0.049 (0.88)	0.067 (1.25)	0.079 (0.75)	0.087 (0.85)	0.177 (1.59)	0.149 (1.39)
Sale to a connected party	-0.062* (-1.68)	-0.068* (-1.91)	-0.038 (-0.57)	-0.061 (-0.92)	-0.148** (-2.15)	-0.148** (-2.36)
Pre-pack	-0.025 (-0.64)	-0.041 (-1.09)	-0.033 (-0.47)	-0.021 (-0.31)	-0.201** (-2.42)	-0.154** (-2.07)
Probability of default	0.551 (1.14)	0.497 (1.10)	1.121 (1.25)	0.753 (0.89)	-0.955 (-1.07)	-1.039 (-1.35)
Size	0.008 (0.63)	0.001 (0.11)	-0.035 (-1.44)	-0.001 (-0.06)	-0.014 (-0.70)	0.038* (1.68)
Age	0.003*** (2.80)	0.003*** (3.30)	0.006*** (3.83)	0.006*** (3.67)	0.003** (2.28)	0.004** (2.57)
Industry fixed on total assets	0.304*** (3.04)	0.268*** (2.80)	0.643*** (3.78)	0.523*** (3.12)	0.167 (0.98)	0.192 (1.17)
Industry total assets per employee	-0.000 (-0.02)	0.000 (0.01)	-0.000 (-0.71)	-0.000 (-0.68)	0.000 (0.40)	0.000 (0.64)
Industry solvency ratio	0.002 (0.90)	0.001 (0.40)	-0.002 (-0.37)	0.000 (0.07)	-0.011** (-1.99)	-0.003 (-0.79)
Secured		0.350*** (4.20)		-0.332*** (-2.62)		-0.309** (-2.47)
Absence of secured debt		0.030 (0.54)				0.233*** (3.21)
Court order		-0.003 (-0.09)		-0.041 (-0.61)		-0.036 (-0.59)
Big 4		-0.093** (-2.00)		-0.080 (-1.13)		-0.047 (-0.59)
Administration		0.061* (1.79)		0.119* (1.90)		0.068 (1.04)
<i>N</i>	232	232	213	213	231	231
adj. <i>R</i> <sup>2</sup>	0.068	0.165	0.048	0.145		
Log-likelihood					-72.37	-57.47
Prob>F					0.031	0.000

**Table 6 Recovery Rate Controlling for Self-Selection (Heckman)**

This table reports results of regressions using as a dependent variable general recovery rate. In model 1 we run an OLS regression with robust standard errors. Model 2 is estimated with the Heckman two-step estimation procedure to correct for self-selection, using all variables of the Probit regression in Table 3 as predictors of Pre-pack to connected party. *Pre-pack to connected party* is a dummy variable which is equal to 1 if the pre-packaged sale is to a connected party. *Pre-pack* is a dummy variable equal to 1 if the sale is pre-packaged. *Sale to a connected party* is a dummy variable equal to 1 if the sale is to a connected party. *Probability of default* is the likelihood of default calculated by Experian from the last available accounts (2003). *Age* is the age of the firm from incorporation to the entry into insolvency. *Size* is the log of the amount of total debt owed at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Administration* is a dummy variable equal to 1 if the insolvency procedure is administration, is equal to 0 if it is receivership. *Court order* is a dummy variable equal to 1 if the entry into administration is through a court order. *Secured* is the percentage of secured debt out of the total debt owed at the beginning of the procedure. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. The sample consists of going concerns sales. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*,\*\* and \*\*\*, respectively. T-statistics are reported in parentheses.

	(1) OLS	(2) Treatment effects
Pre-pack to a connected party	0.067 (1.25)	0.074 (0.31)
Pre-pack	-0.041 (-1.09)	-0.041 (-1.61)
Sale to a connected party	-0.068* (-1.91)	-0.069** (-2.16)
Probability of default	0.497 (1.10)	0.490 (1.03)
Size	0.001 (0.11)	0.002 (0.12)
Age	0.003*** (3.30)	0.003*** (2.98)
Industry fixed on total assets	0.268*** (2.80)	0.271* (1.79)
Industry total assets per employee	0.000 (0.01)	0.000 (0.02)
Industry solvency ratio	0.001 (0.40)	0.001 (0.28)
Secured	0.350*** (4.20)	0.350*** (4.72)
Absence of secured debt	0.030 (0.54)	0.030 (0.62)
Court order	-0.003 (-0.09)	-0.003 (-0.09)
Big 4	-0.093** (-2.00)	-0.093*** (-2.62)
Administration	0.061* (1.79)	0.062* (1.89)
Constant	-0.063 (-0.31)	-0.073 (-0.19)
Lambda		-0.004 (-0.03)
<i>N</i>	232	232
<i>P</i>	0.000	0.000

**Table 7 Recovery Rate Controlling for Self-Selection (Propensity Score Matching)**

This table reports the Average Treatment Effects for the Treated where the treatment is being a Pre-pack to a connected party. We estimate the propensity score as the probability of being a Pre-pack to a connected party conditional on the covariates through a Logit regression. The list of covariates that we use in the estimation is the following: *Probability of default* (likelihood of default calculated by Experian from the last available accounts- 2003), *Age* (age of the firm from incorporation to the entry into insolvency), *Size* (the log of the amount of total debt owed at the beginning of the procedure), *Industry fixed on total assets*, *Industry total assets per employee*, *Industry solvency ratio*. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. The matching technique used is the Nearest Neighbor matching method. Coefficients significant at 10%, 5% and 1% are indicated by \*,\*\* and \*\*\*, respectively.

	N. of treated (Pre-pack to a connected party)	N. of control (Other sales)	ATT	Standard error	t-statistic
Recovery rate	61	67	-0.006	0.048	-0.131
Secured recovery rate	61	54	0.047	0.087	0.538
Unsecured recovery rate	61	66	-0.015	0.020	-0.729



**Table 8 Determinants of Survival Rate**

This table reports results of Probit regressions with robust standard errors with the survival rate as a dependent variable. *Pre-pack to connected party* is a dummy variable which is equal to 1 if the pre-packaged sale is to a connected party. *Pre-pack* is a dummy variable equal to 1 if the sale is pre-packaged. *Sale to a connected party* is a dummy variable equal to 1 if the sale is to a connected party. *Age* is the age of the firm from incorporation to the entry into insolvency. *Probability of default* is the likelihood of default calculated by Experian from the last available accounts (2003). *Size* is the log of the amount of total debt owned at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Administration* is a dummy variable equal to 1 if the insolvency procedure is administration, is equal to 0 if it is receivership. *Court order* is a dummy variable equal to 1 if the entry into administration is through a court order. *Secured* is the percentage of secured debt to total debt owed at the beginning of the procedure. Other variables are industry dummies (ten 1-digit SIC code). The sample consists of going concerns sales. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*,\*\* and \*\*\*, respectively. We report the estimated marginal effects at the mean. T-statistics are reported in parentheses.

	(1) Survival	(2) Survival
Pre-pack to a connected party	-0.085 (-0.63)	-0.088 (-0.64)
Pre- pack	0.058 (0.59)	0.044 (0.44)
Sale to a connected party	-0.028 (-0.30)	-0.040 (-0.43)
Probability of default	1.047 (0.80)	0.915 (0.71)
Age	0.006** (2.00)	0.005** (1.98)
Size	0.027 (0.88)	0.041 (1.19)
Secured		-0.168 (-0.93)
Absence of secured debt		-0.090 (-0.61)
Court order		-0.115 (-1.22)
Big 4		-0.063 (-0.63)
Administration		-0.078 (-0.87)
Industry effects	Yes	Yes
<i>N</i>	230	230
chi2	14.907	18.094
P	0.385	0.516

**Table 9 Conflict of Interests in Pre-Packs: Evidence from Unsecured Recovery Rates**

This table reports the results of Tobit regressions with bootstrapped standard errors of the recovery to the unsecured creditors as a dependent variable (defined as the payments to the unsecured creditors at the end of the procedure divided by the amount of the unsecured debt owed at the beginning of the procedure). *Pre-pack to connected party* is a dummy variable which is equal to 1 if the pre-packed sale is to a connected party. *Pre-pack* is a dummy variable equal to 1 if the sale is pre-packed. *Sale to a connected party* is a dummy variable equal to 1 if the sale is to a connected party. *Probability of default* is the likelihood of default calculated by Experian from the last available accounts (2003). *Age* is the age of the firm from incorporation to the entry into insolvency. *Size* is the log of the amount of total debt owned at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Administration* is a dummy variable equal to 1 if the insolvency procedure is administration, is equal to 0 if it is receivership. *Court order* is a dummy variable equal to 1 if the entry into administration is through a court order. *Secured* is the percentage of secured debt out of the total debt owned at the beginning of the procedure. Other variables are industry dummies (ten 1-digit SIC code). The sample includes cases where the bank is paid in full (84) within the sample of going concerns sales (271). Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*, \*\* and \*\*\*, respectively. We report the estimated marginal effects at the mean. T-statistics are reported in parentheses.

	(1) Unsecured recovery rate	(2) Unsecured recovery rate
Pre-pack to a connected party	0.055 (0.30)	0.075 (0.44)
Pre-pack	-0.015 (-0.12)	-0.101 (-0.83)
Sale to a connected party	-0.081 (-1.06)	-0.057 (-0.72)
Probability of default	-3.032** (-2.15)	-3.032** (-2.24)
Age	0.002 (0.94)	0.003 (1.22)
Size	0.021 (0.87)	0.040 (1.15)
Big4		0.034 (0.28)
Administration		-0.159* (-1.89)
Court order		-0.176* (-1.65)
Secured		-0.357** (-2.07)
Industry effects	Yes	Yes
<i>N</i>	84	84
chi2	110.068	117.766
P	0.000	0.000

**Table 10 Conflict of Interests in Pre-Packs: Evidence from Cases where the Bank is Paid in Full**

This table reports the results of Probit regressions with robust standard errors with a dummy variable equal to one if the insolvency is a pre-pack to a connected party as dependent variable in the first two models, a dummy variable equal to one if the insolvency is a pre-pack as dependent variable in the second two models and a dummy variable equal to one if the insolvency is a sale to a connected party as dependent variable in the last two models. *Secured creditor paid in full* is a dummy variable which is equal to 1 if the secured creditor receives at least 95% of the amount of total debt owned at the beginning of the procedure. *Probability of default* is the likelihood of default calculated by Experian from the last available accounts (2003). *Age* is the age of the firm from incorporation to the entry into insolvency. *Size* is the log of the amount of total debt owed at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Receivership* is a dummy variable equal to 1 if the insolvency procedure is receivership, is equal to 0 if it is administration. *Court* is a dummy variable equal to 1 if the entry into administration is through a court order. *Unsecured* is the percentage of unsecured debt of the total debt owed at the beginning of the procedure. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. The sample consists of the cases of going concern sales. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*,\*\* and \*\*\*, respectively. We report the estimated marginal effects at the mean. T-statistics are reported in parentheses.

	(1) Pre-pack to a connected party	(2) Pre-pack to a connected party	(3) Pre- pack	(4) Pre- pack	(5) Sale to a connected party	(6) Sale to a connected party
Secured creditor paid in full	0.071 (1.22)	0.077 (1.29)	-0.003 (-0.04)	0.017 (0.23)	0.030 (0.41)	0.010 (0.13)
Probability of default	0.945 (0.99)	1.060 (1.14)	2.081 (1.62)	2.090 (1.62)	-0.845 (-0.62)	-1.032 (-0.76)
Age	0.002 (0.78)	0.002 (0.85)	-0.000 (-0.12)	-0.001 (-0.19)	0.003 (1.10)	0.003 (1.06)
Size	-0.058** (-2.33)	-0.063** (-2.31)	0.001 (0.04)	0.007 (0.19)	-0.125*** (-3.70)	-0.109*** (-2.97)
Industry fixed on total Assets	-0.632*** (-2.64)	-0.591** (-2.44)	-0.409 (-1.42)	-0.378 (-1.30)	-0.193 (-0.74)	-0.216 (-0.81)
Industry total assets per employee	-0.000** (-2.42)	-0.000** (-2.51)	-0.000** (-2.11)	-0.000** (-2.16)	0.000 (0.05)	0.000 (0.03)
Industry solvency ratio	-0.011* (-1.89)	-0.011* (-1.91)	-0.010 (-1.22)	-0.011 (-1.35)	-0.002 (-0.33)	-0.003 (-0.40)
Court order		-0.084 (-1.34)		-0.043 (-0.45)		-0.050 (-0.50)
Big 4		0.069 (0.78)		-0.061 (-0.63)		-0.074 (-0.74)
Receivership		-0.005 (-0.08)		0.067 (0.76)		-0.032 (-0.36)
Unsecured		0.010 (0.08)		-0.069 (-0.42)		0.048 (0.28)
<i>N</i>	213	213	213	213	213	213
chi2	24.180	27.417	10.103	12.387	17.121	18.629
P	0.001	0.004	0.183	0.335	0.017	0.068

**Table 11 Conflict of Interests in Pre-Packs: Evidence from Credit Scores**

This table reports the results of Probit regressions with robust standard errors with a dummy variable equal to one if the insolvency is a pre-pack to a connected party as dependent variable. In the first two models the sample consists of going concern sales where the bank is paid in full. In the last two models the sample consists of going concern sales where the bank is not paid in full. *Probability of default* is the likelihood of default calculated by Experian from the last available accounts (2003). *Age* is the age of the firm from incorporation to the entry into insolvency. *Size* is the log of the amount of total debt owed at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Receivership* is a dummy variable equal to 1 if the insolvency procedure is receivership, is equal to 0 if it is administration. *Court* is a dummy variable equal to 1 if the entry into administration is through a court order. *Unsecured* is the percentage of unsecured debt of the total debt owed at the beginning of the procedure. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*,\*\* and \*\*\*, respectively. We report the estimated marginal effects at the mean. T-statistics are reported in parentheses.

	Bank paid in full		Bank not paid in full	
	(1)	(2)	(3)	(4)
Probability of default	4.320** (2.45)	4.304** (2.33)	-0.604 (-0.54)	-0.394 (-0.36)
Age	-0.006* (-1.96)	-0.007** (-2.16)	0.004* (1.81)	0.004* (1.89)
Size	-0.094* (-1.92)	-0.093* (-1.74)	-0.051* (-1.82)	-0.065** (-2.03)
Industry fixed on total assets	-0.799** (-2.06)	-0.795** (-2.01)	-0.578* (-1.86)	-0.585* (-1.73)
Industry total assets per employee	-0.000 (-1.18)	-0.000 (-1.34)	-0.000** (-2.13)	-0.000** (-2.18)
Industry solvency ratio	-0.019 (-1.60)	-0.022* (-1.73)	-0.009 (-1.25)	-0.007 (-0.90)
Court		-0.116 (-1.17)		-0.065 (-0.95)
Big4		0.031 (0.20)		0.161 (1.44)
Receivership		-0.011 (-0.09)		-0.013 (-0.17)
Unsecured		-0.204 (-0.90)		0.116 (0.80)
<i>N</i>	84	84	129	129
chi2	15.985	16.508	15.772	18.252
P	0.014	0.086	0.015	0.051

**Table 12 Pre-Packs to Connected Parties and Piecemeal Liquidation**

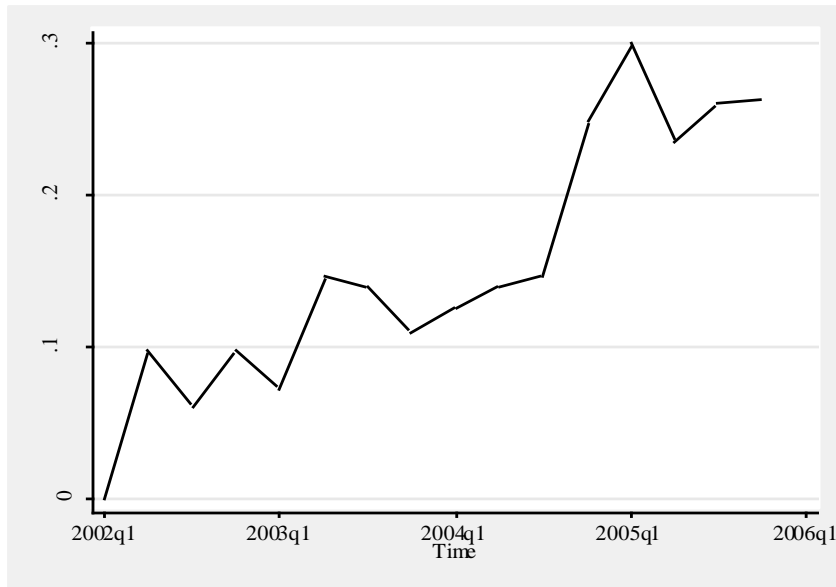
This table reports univariate statistics of the comparison between pre-packs to connected parties and cases of piecemeal liquidation. *Age* is the age of the firm from incorporation to the entry into insolvency. *Total debt* is the amount of total debt owned at the beginning of the procedure. *Secured* is the percentage of secured debt out of the total debt at owned at the beginning of the procedure. *Big4* is a dummy variable equal to one if the IP works for one of the Big 4 accounting firms. *Court* is a dummy variable equal to 1 if the entry into administration is through a court order. The industry variables are constructed in the following way: for each variable of interest (i.e. intangibles over total assets) we associate to each company in the sample the median value of the companies in the same 2-digit code industry. Variables are winsorized at 1%. Coefficients significant at 10%, 5% and 1% are indicated by \*, \*\* and \*\*\*, respectively. T-statistics are reported in parentheses.

	Piecemeal liquidation		Pre-packs to a connected party		Diff.	
	Mean	Median	Mean	Median		
Total debt	1931002	751877	1442903	747186	488098.3	(0.96)
Secured	0.29	0.239	0.376	0.35	-0.086**	(-2.36)
Age	12.261	8.496	12.044	8.591	0.217	(0.14)
Industry solvency ratio	33.887	32.785	33.085	32.785	0.802	(1.21)
Industry turnover on total assets	1.89	1.869	1.936	1.869	-0.046	(-0.70)
Industry fixed assets on total assets	0.268	0.221	0.257	0.218	0.011	(0.57)
Industry plants and mach. on total assets	0.054	0.023	0.054	0.023	-0.000	(-0.05)
Industry intangibles on total assets	0.154	0.154	0.166	0.162	-0.012	(-1.10)
Industry total assets per employee	65036.44	54773	58360.42	54773	6676.0**	(2.18)
Big4	0.123	0	0.164	0	-0.041	(-0.91)
Court	0.23	0	0.148	0	0.083	(1.47)
Unsecured recovery rate	0.042	0	0.034	0	0.008	(0.48)
Secured recovery rate	0.476	0.375	0.672	1	-0.196***	(-3.26)
Recovery rate	0.156	0.083	0.246	0.206	-0.089***	(-3.28)
Observations	473		61		534	

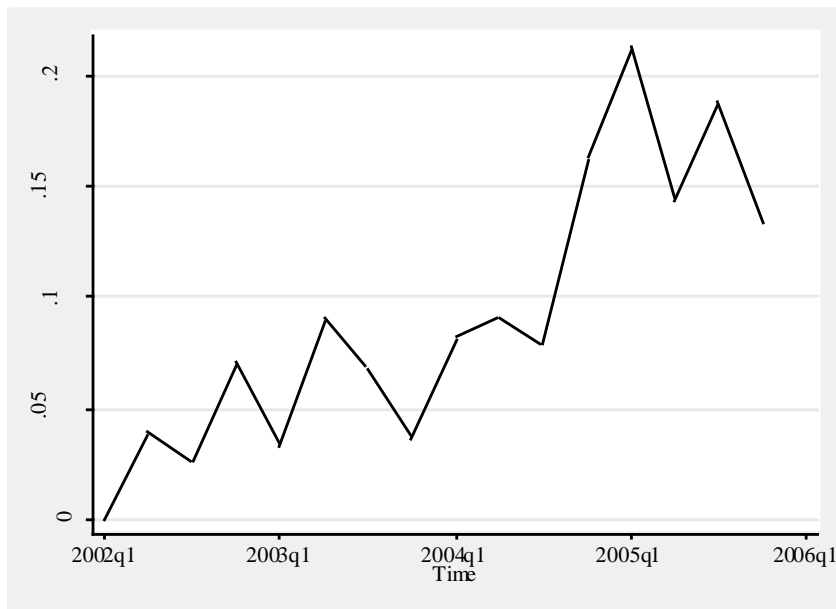
### Figure 1 The Increase in Pre-Packs and Pre-Packs to Connected parties

This figure shows the increase in the business practices of pre-packs and pre-packs to connected parties as percentages of total insolvencies from 2001 to 2006.

#### 1.A Pre-Packs



#### 1.B Pre-Packs to Connected Parties



## Figure 2 The Distribution of Unsecured Recovery Rates when the Bank is Paid in Full

These figures compare the distributions of unsecured recovery rates when the bank is paid in full in pre-packs to connected parties and other sales. The sample of Figure 2.A consists of the total of going concern sales. The sample of Figure 2.B consists of only connected sales.

Figure 2.A All Going Concern Sales

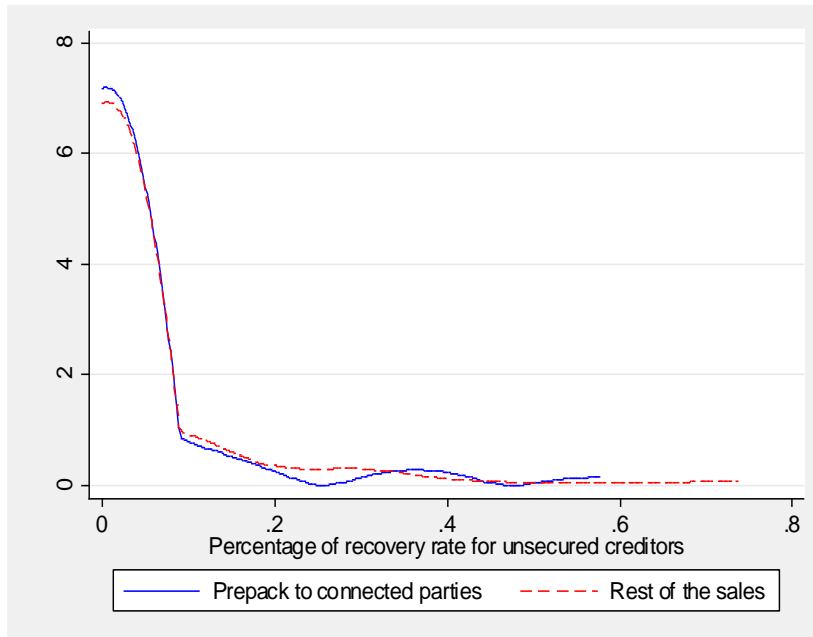


Figure 2.B. Only Connected Sales

