CREDITOR STRATEGY IN INDIVIDUAL

INSOLVENCY

BY: Keith Pond

The Business School

Loughborough University

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ABSTRACT

Under UK Insolvency law creditors face a strategic choice when dealing with some insolvent individual debtors. Since 1986 Individual Voluntary Arrangements (IVAs) have been available to return better recoveries than bankruptcy but returns are subject to a greater degree of uncertainty.

In this paper Game Theory is used to model the strategic choice and the proposition that creditors face. The game played out is an indefinitely repeating non-co-operative game with player learning and risk minimisation supported by empirical evidence from studies of IVAs.

The paper shows that creditors have the potential to select revenue maximising strategies based on simple review of the IVA proposal their knowledge of the debtor and the perceived probity of the insolvency profession. Consistent use of successful strategies could both increase the acceptance and incidence of IVAs and improve the likelihood of recovery.

(140 words)

CREDITOR STRATEGY IN INDIVIDUAL INSOLVENCY

INSOLVENCY CHOICES

Since the Insolvency Act 1986 came into force in late 1986 both creditors and debtors have been faced with a choice when formal insolvency proceedings for an individual are commenced. Initially the individual debtor can choose bankruptcy via a debtor's petition or apply for an Individual Voluntary Arrangement (IVA). The IVA, introduced in the 1986 Insolvency Act is a formal means of avoiding bankruptcy by getting creditors to accept a compromise in the satisfaction of their debts. A similar choice was theoretically available via the Deeds of Arrangement Act 1914 before 1986 but in reality this regime had fallen into disuse (Cork Committee, 1982).

The choice faced by creditors and debtors is not a completely free one however. It is constrained by assumptions made about the creditors; specifically whether or not they will accept an IVA (See Box 1), and what conditions they will exact before acceptance. It is also constrained by assumptions made about the capacity of debtors to fulfil their obligations under the IVA.

TAKE IN BOX 1 HERE

IVA incidence has grown considerably since 1986. Bankruptcies have yet to reduce in number to their pre-recession (1988/89) level and may not ever do so due to the reduced "stigma" of bankruptcy and the growth in availability of credit (Bien, 1999; Wise, 1997). Current government proposals also suggest greater scope for relaxation of restrictions on bankrupts (Atkinson, 1999, Insolvency Service, 2000). In the meantime, IVAs have steadily increased their share of the personal insolvency "market". Despite a Society of Practitioners of Insolvency (SPI) suggestion that the 1996 level of 17% was a "natural" one (SPI, 1992-1998) IVA numbers have grown steadily and in 1999 represented 25% of formal insolvencies (DTI Statistics Service, 2000).

The apparent low level of IVA uptake, however, is deceptive. When viewed alongside the observation that 80% of bankruptcies reveal no assets and return a nil dividend to creditors (Pond, 2000) the proportion of remunerative insolvencies dealt with by IVA rises to 82% of the total. This is helped by the courts insisting that IVAs must offer better creditor returns than bankruptcy. IVAs can often do this on the basis of reduced costs and the opportunity for the debtor to continue to trade or to earn income for the benefit of creditors (Pond, 1989).

This article draws on questionnaire and interview based research undertaken at Loughborough University Banking Centre (Pond, 1998) that focused largely on the IVA process and how creditor attitudes to IVAs have changed over the last decade. The period since 1987 has seen significant ways in which IVAs have changed due both to

external, largely economic, influences and to a growing realisation amongst creditors that they can have a significant influence on the IVA process.

The findings are set against the background of economic "Game Theory" which models situations of interdependence where discrete choices are made by a small number of parties based on their assumptions of how their opponents will react (Bierman & Fernandez, 1998; Kay, 1993). The Prisoner's Dilemma game is familiar to students of oligopoly or duopoly behaviour. In this paper I argue that the possible solutions to the dilemma are applicable in the individual insolvency situation.

THE PRISONERS DILEMMA

The Prisoner's Dilemma models the choices faced by two thieves arrested carrying the tools of their trade and kept in separate cells in the Police Station. Each thief is made the same offer by the police: If one thief confesses and the other does not the partner will get 10 years in jail whilst the other goes free. If both confess they are likely to get 7 years in jail each but each knows that if they both stay silent the police only have enough evidence to jail them for 1 year each.

TAKE IN FIGURE 1

For each thief the "Confess" strategy is ***strictly dominant*** since each thief knows that, whatever decision the other thief takes, confession will deliver a better pay-off than silence.

The central problem is one of simultaneous decision making, unaffected by the actual decision made by the other party (Poundstone, 1992). In a single iteration of the game both thieves will confess as the risk of trusting the fellow thief to remain silent is too great. Thus, the best outcome for both - silence - will not be chosen. Individual rationality will dominate group rationality (Thomas, 1984)

Co-operation or collusion prior to their arrest, or a better knowledge of the other thief's likely decision would potentially change the outcome to a "Silence" strategy being adopted by each thief. This is especially true if the thieves were put in the same position repeatedly and learned to trust each other to remain silent.

Where the game is repeated a fixed number of times then the last game's dominant strategy is "Confess". In this way co-operation unravels and, in anticipation of the last game, all earlier games will use the {Confess, Confess} strategy too (Selten's theorem (Selten, 1973).

By repeating the game indefinitely, however, a "tit for tat" strategy is optimum. Confession by one thief is punished by "Confess" at the next iteration by the other.

Likewise "Silence" is rewarded by "Silence" the next time around. The overall effect is co-operation in the long run.

An alternative solution to the dilemma is to change the pay-offs for each thief. If, instead of freedom, the thieves believed that the penalty for confession would be a visit from the friends of the thief who goes to jail, equivalent, say, to a five year "sentence" in hospital (The Criminal's Revenge game) the outcome would also be altered (Kay, 1993). In the Criminal's Revenge game the best strategy for each thief is to follow what the other thief does, or at least to choose the same strategy that the thief anticipates the other thief will choose. In more formal terms this is a *Nash equilibrium*.

THE INSOLVENCY GAME

The choice faced by insolvent debtors and creditors is a potential Prisoners' Dilemma game. The best outcome for both parties in terms of benefit is to propose and accept an IVA but the creditor's choice severely curtailed by the predisposition of the debtor towards bankruptcy in the first instance. It is also affected by the existence of "moral hazard" and "adverse selection" which combine to make the IVA choice riskier for the creditor.

Moral hazard exists in the IVA situation as the creditor is forced by the Insolvency Act 1986 to make a choice (IVA acceptance) following which debtors can take actions,

unobservable by creditors, which transfer greater risk to creditors. Moral hazard is apparent in all lending situations where the honesty of debtors is not known. Credit "scoring" and other "arms length" credit assessment techniques lead to the retention of this type of risk. In short, debtors can fail to comply with their own IVA proposals. This is compounded by the lack of a formal investigation of the debtor's affairs in an IVA. Creditors who doubt the integrity of the debtor should opt for bankruptcy and the certainty of an investigation and possibility of a public examination of the bankrupt in open court.

Physical hazard exists in IVA and bankruptcy alike. This refers to events outside the debtor's control and cannot be avoided completely.

Adverse selection occurs in the IVA since all debtors entering an IVA are, by definition, insolvent and generally less desirable for creditors to bargain with both in terms of their history of failure. By definition insolvent debtors are without liquid resources, neither are they isolated from their poor credit history with the very creditors to whom the settlement offer is made.

The insolvency game can be summarised in the following matrix:

TAKE IN FIGURE 2

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In the matrix the pay-off "B" is the benefit available to the creditor in bankruptcy. The debtor's benefits are "0" in bankruptcy which includes the penalties and restrictions of full bankruptcy or "<0", where the debtor has, in addition, paid the petition fee or the IVA set up costs. The debtor pay-off "(>B-B)" is the value of the positive "benefit" to the debtor of the IVA in terms of the price above "B" that the debtor is willing to pay to secure an IVA. It is assumed that the debtor will wish to avoid bankruptcy provided the cost, in terms of IVA commitments, does not exceed the perceived benefits of the IVA. One element in the choice is the moral stance of the debtor as opposed to the purely economic one but this analysis does not model different views on debt repayment. The influence of different attitudes to bankruptcy is very real , however, and should be acknowledged (Erfat, 1998).

Creditor benefits are summarised as projected dividends on unsecured debts. The pay-off ">B" indicates that the IVA dividend is superior to that in the bankruptcy of the same debtor. It is assumed that creditors will wish to maximise their revenue returns from the insolvency situation. Lastly, the pay-off "<B" includes the transaction costs associated with abortive attempts to set up an IVA from either the debtor or creditor moving first (see Figure 3). Average dividends in recent IVA cases indicate a 31% return in IVA and 14% in bankruptcy (Pond, 1998).

Where a debtor opts for bankruptcy, and moves first, an IVA is unlikely. Average costs of £2,500 to set up an IVA compare unfavourably with the £350 bankruptcy petition fee. The Insolvency Act 1986 (Section 273-4) does provide that when an insolvent debtor

presents a bankruptcy petition and the accompanying Statement of Affairs (Section 272) indicates debts of under £20,000 and assets of over £2,000, the court will order an IVA feasibility study by a court-appointed IP. Without the debtor's co-operation, however, the proposal cannot be generated and court approval cannot be gained. Only an estimated 4% of all IVAs are commenced via this route (Pond, 1998).

Where a creditor opts for bankruptcy by presenting a bankruptcy petition the debtor is most likely to be declared bankrupt. IVAs are possible after a petition but the time to set one up is limited. IVAs are also technically possible after bankruptcy but only 15% begin in this way (Pond, 1998). When bankruptcy ensues following rejection or failure of an IVA the bankruptcy dividend is likely to be lower than that in a first instance bankruptcy since some of the debtor's funds have been used in paying the IVA fees. The passage of time has also caused some asset values to decline.

TAKE IN FIGURE 3

The real dilemma for the creditor is that an accepted IVA that fails subsequently is likely to result in a reduced or even zero dividend.

As in the Prisoners' dilemma game the strategy where both creditor and debtor benefit the most *{IVA, IVA}* will only be chosen where each party knows and trusts the intentions of the other and where risk can be reduced or eliminated. In the absence of this collusion or risk assessment the *strictly dominant* strategy will result in the certainty of bankruptcy

and the lower dividend payout. The creditor's optimum strategy, therefore, is to accept

only IVA proposals that combine the projection of higher dividends than in bankruptcy

and the likelihood of successful realisation.

In this context creditors will rely on their experience and knowledge of Insolvency

Practitioners (IPs) as they pre-select IVAs that are likely to succeed. The IP's own code

of conduct, embodied in the Statement of Insolvency Practice 3 (SPI, 1997) engages IPs

to consider the credibility of the debtor in making a Proposal. Comments from the IP can

indicate to creditors those cases most likely to return a dividend.

The debtor's optimum strategy for IVA acceptance is to propose a compromise that

realistically offers creditors a better return than bankruptcy and also offers the debtor

benefits over and above the mere avoidance of bankruptcy. Although no specific

research has been published, to date, on the changing attitude to bankruptcy in the UK

since the 1986 legislation there is evidence of more permissive attitudes to debt (Lea,

1993). This could mean that the "stigma" of bankruptcy is not as great as before and the

threat of bankruptcy not as motivating for the debtor as in the past (Bien, 1999; Wise,

1997).

If creditors assume that the debtor's attitude to bankruptcy is one of indifference the pay-

offs will alter as the debtor perceives some positive benefit under bankruptcy to balance

out the penalties. In this way the prediction of the Criminal's Revenge game prevails

suggesting that the best strategy for the creditor is to copy the option chosen by the

debtor. Whilst this strategy does offer the creditor the best dividend in the circumstances there is less overall incentive to choose the IVA route.

Oddly this gives rise to the paradox that policy makers may need to retain or reinstate the punitive effects of bankruptcy if business rescue via the IVA is to be encouraged.

BUILDING TRUST

Unlike the static Prisoners' Dilemma game creditors and debtors have opportunities to assess each other's position and to frame the IVA offer so that it anticipates and answers the reservations that each party has. Insolvency Practitioners (IPs), as proxy for the debtors they advise, can benefit from past experience where individual debtors cannot, since they are precluded from proposing a subsequent IVA within five years of the acceptance of their last. In this way the insolvency game is not static but an indefinitely repeated game between IP and major creditors since most insolvencies feature debts payable to the Inland Revenue, Customs & Excise and major credit providers.

Although the creditor and IP learning process and the practical management of IVAs shows that there is contact between these parties the insolvency game is a non-co-operative one. Creditors make independent decisions about IVAs based on their own predisposition and risk assessment procedures. Indeed, the evidence from the current research indicates that creditors often act in a unilateral but predictable way. There is

also evidence that creditors are risk-averse rather than risk-neutral in that they seek to reduce risk by suggesting modifications to proposals.

Central to the choice of IVA acceptance by the creditor is the perception of the trustworthiness and probity of the IP. The prudent IP will have pre-selected debtors who are able to put forward and sustain realistic IVA proposals (Pond & Evans, 1995). Creditors are also aware of the activities of less diligent IPs in this respect, much as they are in corporate situations (Flood, 1995). Some IPs were described to us by survey respondents as "cowboys" and "ambulance chasers". These IPs use IVA in every instance of individual insolvency due to the front loading of their fee rather than the IVA being the best solution. Only creditors willing to file complaints to the IP regulatory bodies can realistically police the activities of the "cowboys". Perhaps the introduction of an insolvency "watchdog" may help in this regard (Finch, 1998; Kemeny, 1999).

IVA FAILURE RISK

Creditors have relatively little time to consider their response to an individual IVA proposal but have the capacity to base their judgement on the proposal itself; previous knowledge of the debtor; knowledge of the IP and contact with the IP.

One certain source of information is the proposal itself and the creditor must judge whether it is realistic, whether the proposed dividend is acceptable and whether the

proposal protects the creditor's position adequately. In addition a positive report from the IP, prior to the creditors' meeting, should indicate that the statement of affairs is realistic, the proposal has a real prospect of success and that the proposal is fair (SPI, 1997). There is no evidence to suggest, however, that larger IP firms are any more effective in supervising successful IVAs than smaller ones.

Although it is a necessary feature of all IVAs that the projected dividends are better than in the bankruptcy of that debtor the probability that the higher dividend will be paid is much less. There is an estimated overall 31% failure rate of accepted IVAs (Pond, 1998), correlated significantly with debtor non-co-operation. In addition, IVA dividends are more likely to be paid over a longer period, which means that the creditor will need to discount the dividend flow over the duration of the IVA rather than the 12 months of a typical bankruptcy. The longer time period and the greater involvement when the IVA is set up also give rise to greater transaction costs.

Analysis of data from the 1998 study of IVAs reveals a number of features associated, to a greater or lesser degree, with an above average likelihood of failure. These features are summarised in Table 1.

TAKE IN TABLE 1

Linked with the incidence of debtor non-co-operation it appears that over-ambitious IVAs which offer substantially larger dividends than bankruptcy and those which give debtors no benefit over bankruptcy are far riskier.

IVA RISK ASSESSMENT

The 1998 research used a postal questionnaire addressed to a sample of IPs from IVAs commenced in 1994/95. The questionnaire was advised through the use of focus group feedback at the January 1997 regional meeting of SPI, the IPs "umbrella" professional body. This forum highlighted the dearth of research on creditor attitudes to and influence on IVAs.

A systematic sampling method was used to select 879 accepted cases from the public register of IVAs maintained by the Insolvency Service. By restricting the number of questionnaires to be sent to individual IPs to three this sample was reduced to 490 cases. The questionnaire was designed to elicit both objective and subjective information about accepted IVA proposals. Cases from 1994 and 1995 were chosen for the study sample, as these would have had long enough, by early 1998, to have either run their course or to be close to a conclusion. This mirrored the methodology used in 1989 (Pond, 1989) and 1993 (Pond, 1993). An overall response rate of 30% was achieved (145 cases) and key findings were discussed in interview with 10 representative IPs together with The Insolvency Service and a major creditor organisation.

Based on Table 1 the IVA features that indicate riskier than average proposals include:

- Debtor non-co-operation

- Forecast dividends

- Size and length of the IVA

- Modifications agreed at creditors' meetings

<u>Debtor Non-co-operation</u>

The principal reason for IVA failure reported is debtor non-co-operation (see also Pond & Evans, 1995). In the 1998 survey respondents were asked to rate debtor co-operation on a five-point scale (5 for "really co-operative" and 1 for "really uncooperative"). Not surprisingly the failure rate for co-operative debtors was significantly lower (7.9%) than for non-co-operative ones (80.6%).

This information is of little use to the manager trying to decide whether a proposal has a realistic chance of success since non-co-operation occurs after the creditors' meeting. In a few cases the creditor will know the debtor or the IP well enough to make a judgement about the integrity of the proposal but in most cases, this will be an unquantifiable element of the risk factor.

Non-co-operation encompasses two different types of behaviour, according to interviewees. The first is the debtor's motivation and supportiveness of the IVA. Many debtors see the IVA as a godsend at a time of huge pressure from creditors and family. Optimism and co-operativeness prior to the creditors' meeting can soon turn to non-compliance afterwards, as cash payments have to be made to the supervisor. Many "non-co-operative" debtors fail to realise the importance of what they enter into and rely on the IP to implement the proposal. It was felt that IPs should judge whether debtors are suitable candidates to carry out what is promised in the proposal rather than rely on the "punishment strategy" of the genuine threat of bankruptcy. Many cases studied show that the bankruptcy threat is very credible, given the retention of funds by the IP for this purpose.

The second type of behaviour is the failure of the debtor to fulfil the conditions of the proposal. This could be something as basic as a failure to provide accounts within a set time limit or as serious as a business downturn resulting in insufficient funds to make monthly payments or to pay ongoing tax and VAT obligations. Clearly some debtors in this situation will still be co-operative and motivated to make the IVA succeed but will fail due to external pressures.

During the house price boom of the late 1980's IVA returns improved as property equity boosted debtors' assets (Flynn, 1993). The 1998 study shows that the economic cycle can also have negative effects.

Measuring the IVA

Two factors that could bear heavily on co-operation by the debtor are the size of the dividend forecast and the duration of the IVA. Average dividends, to unsecured creditors, anticipated at the outset of the IVA were 30.69p in the £ for IVAs in the 1998 study (47.62p in 1989). This contrasts with 14.35p if bankruptcy had ensued for these individuals (22.06p in 1989).

The smallest cases are associated with the smallest dividends and with the smallest of benefits over bankruptcy, measured by the difference in anticipated dividends. In addition the cases with assets below £20,000 show a greater chance of failure during the course of the IVA (39%). Where more than £20,000 is offered in the IVA the failure rate falls to 26%. There appears, therefore, to be little reason, in terms of revenue, for backing particularly small IVAs.

One of the most significant findings of the 1998 study was the increased chance of failure of the IVA where the difference between the IVA and bankruptcy dividends is either nil or exceeds 20p. A proposal offering a dividend of 10p to 20p more than in bankruptcy has a 16.9% chance of failure, whilst a proposal offering over 20p more than bankruptcy has a 37.8% failure chance. A proposal offering the same dividend as in a bankruptcy has a 66.7% chance of failure.

Linked with the incidence of debtor non-co-operation it can be seen that proposals that either mirror the effects of bankruptcy for the debtor or are over-ambitious are riskier.

Whilst likely asset realisation values are more certain the problems appear to lie with the income stream of the debtor in the future. One method of improving IVA size, where an income stream is available, is to extend the duration of the IVA. What is clear from the 1998 study is that IVAs are becoming longer. In 1993 51.22% of IVAs studied were completed in less than one year. In his 1992 text on IVAs Stephen Lawson wrote, *"It will only be in exceptional circumstances that a voluntary arrangement will last for longer than two years"* (Lawson, 1992)

In 1998, however, only 10.34 % of cases were due to be completed in under one year whilst 44.13% were designed to exceed the three year mark. Three years had always been seen as a benchmark as this is the likely duration of a full bankruptcy. Only the shortest IVAs (under one year) had a lower failure rate (13%) than the average. Although not certain, this could be because they relied on the liquidation of assets rather than the expectation of income in the future.

Creditors' meeting modifications

On receipt of the IVA proposal the creditor has a limited time to judge whether it is realistic and whether the proposed dividend is acceptable. To help creditors a positive report from the IP, prior to the creditors' meeting, should indicate that the statement of

affairs is accurate, the proposal has a real prospect of success and that the proposal is fair (SPI, 1997). Creditors can further strengthen their position by drafting and submitting modifications to the proposal for consideration at the creditors' meeting.

One very prominent feature of the 1998 study was the turnaround by creditors from their fairly indifferent attitude of 1989. In 1989 the average attendance (both actual and by proxy) at creditors' meetings in accepted IVAs was 56.3% with only 23% of meetings actually modifying the proposal. By 1998 average attendance had risen to 81% with 53% of cases reporting over 50% attendance. In addition, 71% of study cases were modified at creditors' meetings. This latter finding may have much to do with the policy of some creditors to insist on modifications to all IVAs. Many modifications are offered in exchange for support.

The imposition of modifications *per se* is not linked with the chance of failure. When particular modifications are reviewed, however, a different picture is presented. The major modifications reported in the 1998 study were:

- Changed duration

- Increased income contribution

- Property related

- Windfall

- Administrative modifications, including a limit on new credit and provision of accounts.

Both increased debtor co-operation and a lower than average chance of ultimate failure (24%) are associated with "Windfall" modifications. The logical explanation is that the clause has no immediate impact on the debtor and can be seen as a cost-less concession.

Modifications to extend the IVA are linked to slightly greater co-operation of the debtor, although the chance of failure of the IVA is still average (31%). Longer IVA periods indicate that debtors will work hard to avoid bankruptcy especially as a greater proportion of IVAs is seen in Business & Professional Services, compared with other trades. A number of professions, including Solicitors, Architects and Accountants, withdraw the license to practice on bankruptcy but not on the acceptance of an IVA.

Greater pressure appears to be placed on the debtor, however, when modifications seeking increased monthly contributions from income are tabled as the level of co-operation falls. The same is seen when "administrative" modifications are added such as the retention of funds by a supervisor to ensure that the bankruptcy threat for non-compliance is a credible one.

The clearest links to non-co-operation and a higher failure rate (49%) are seen when property related modifications are sought. Typical clauses call for revaluation of the family home towards the end of the IVA, and a re-mortgage or sale of the property if sufficient equity is apparent. These clauses are agreed by the pressurised debtor at the creditors' meeting but, on reflection, appear to erode the debtor's benefits under the IVA.

This erosion puts the debtor closer to the position under bankruptcy and offers no compensating advantage, especially when the bankruptcy discharge period is generally shorter.

The knowledge that so many creditors seek to apply modifications also leads IPs to incorporate commonly suggested modifications in proposals at the outset. This suggests that IVAs are far more "creditor friendly" than in the past and that they reflect less and less the wishes of the debtor. The eventual price of "success" in getting the debtor to agree to certain modifications may be the greater likelihood of debtor non-co-operation and IVA failure in the longer run.

The repeated game prediction

The 1998 study also confirms that the insolvency game is played out not between creditor and debtor but increasingly by their proxies and agents. Through their privileged position created by licensing, introduced in the Insolvency Act 1986, and their offer of "free" meeting attendance services to creditors, IPs call, run and attend creditors' meetings to the potential exclusion of independent creditors.

These features allow for the necessary building of trust between creditors and IPs and the opportunity for creditors to monitor performance. Whilst there is no evidence of any conflicts of interest this does suggest that the insolvency game is moving closer and

closer to the "repeated game" prediction of an *{IVA, IVA}* strategy. Additionally IPs can signal the good intentions of debtors to creditors with whom they have developed good relationships.

Although creditor influence can be malign it does not have to be so. It is a tool that needs to be used sensitively. Whilst modifications are a creditor's right the victory can be pyrrhic. Far more helpful, according to the research findings, is the maintenance of contact and support during the period of the IVA, both before and after the creditors' meeting. The 1987/88 cases showed that support of a main mortgage lender was often linked with ultimate success of the IVA (Pond, 1993). The 1994/95 cases show that ultimate success is linked with creditor support and contact throughout the IVA.

CONCLUSIONS

Successful debt recovery strategies depend not only on a good knowledge of the alternative legal procedures available but also on a good assessment of the risks involved in following one particular procedure. This is brought into sharp focus by the choice facing creditors presented with a debtor's proposal for an IVA. Over the past decade creditors, their professional advisors and IPs have learned crucial lessons about IVAs that succeed and those that fail.

In the indefinitely repeated non-co-operative game the strategic choice to be made by creditors allows a revenue maximising strategy to be selected more consistently by assessing the risk of IVA failure and using this to discount the projected dividend. Where the risk and present value discounted dividend is higher than that achievable in the bankruptcy of the debtor the creditor should vote for the IVA.

Creditors need to be aware that as society's attitude to bankruptcy changes the risk factor also changes. If bankruptcy is no longer stigmatised by society debtors may not work as hard to avoid it.

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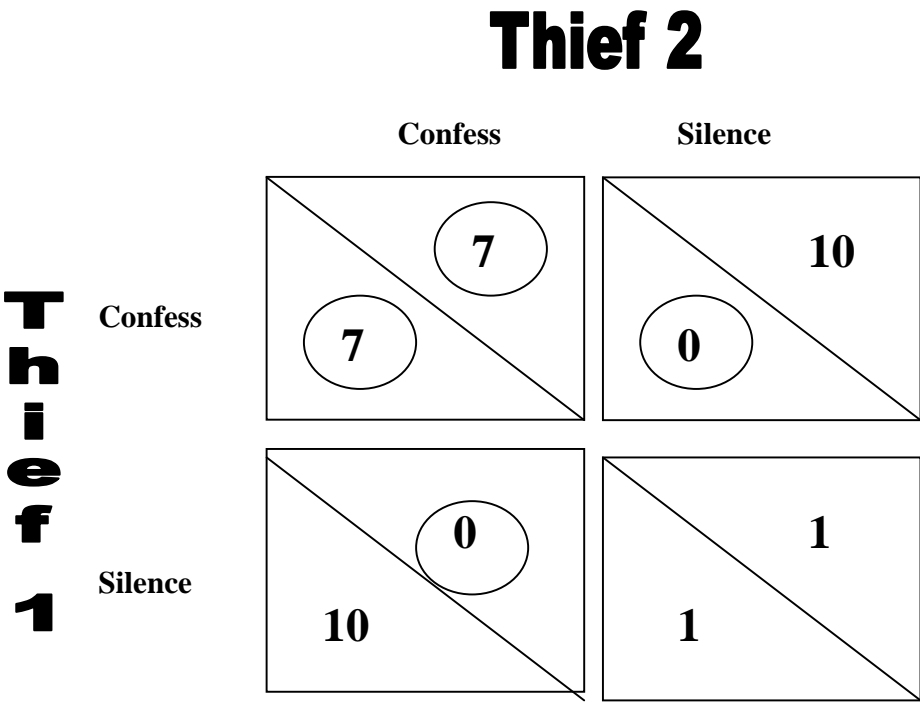**Society of Practitioners of Insolvency**, (1997), *Statement of Insolvency Practice 3 (E&W) – Voluntary Arrangements,* SPI, London.

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Figure 1: *The Prisoner's Dilemma*

Thief 2

	Confess	Silence
Confess	7 / 7	10 / 0
Silence	0 / 10	1 / 1

(Thief 1 labels the rows; Thief 2 labels the columns. In each cell the bottom-left payoff is for player 1 and the upper-right for player 2.)

In each quadrant the bottom left payoff is for player 1 and the upper right for player 2. Circles indicate that a payoff is the best outcome for that player given the strategy of the other.
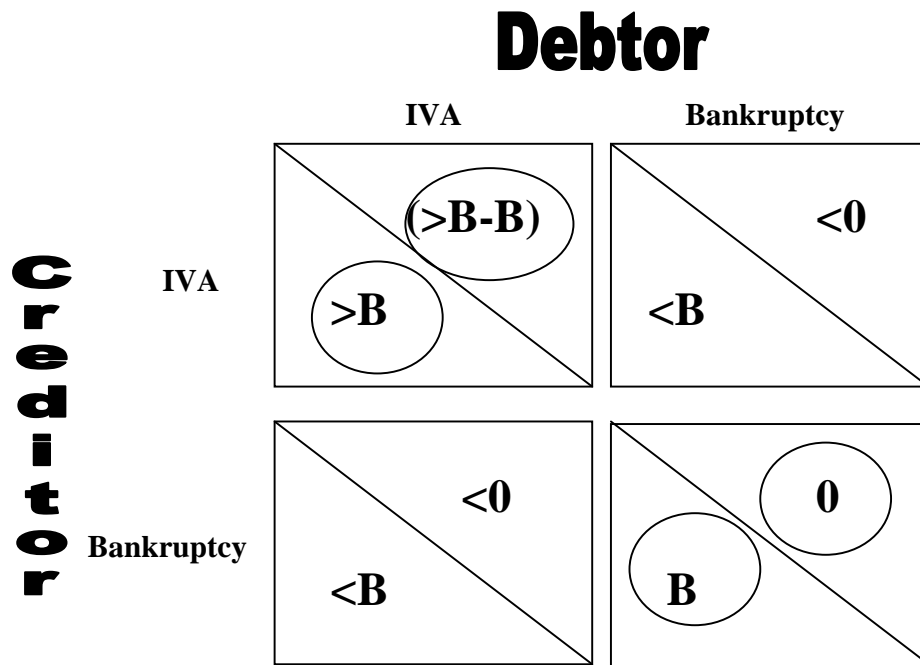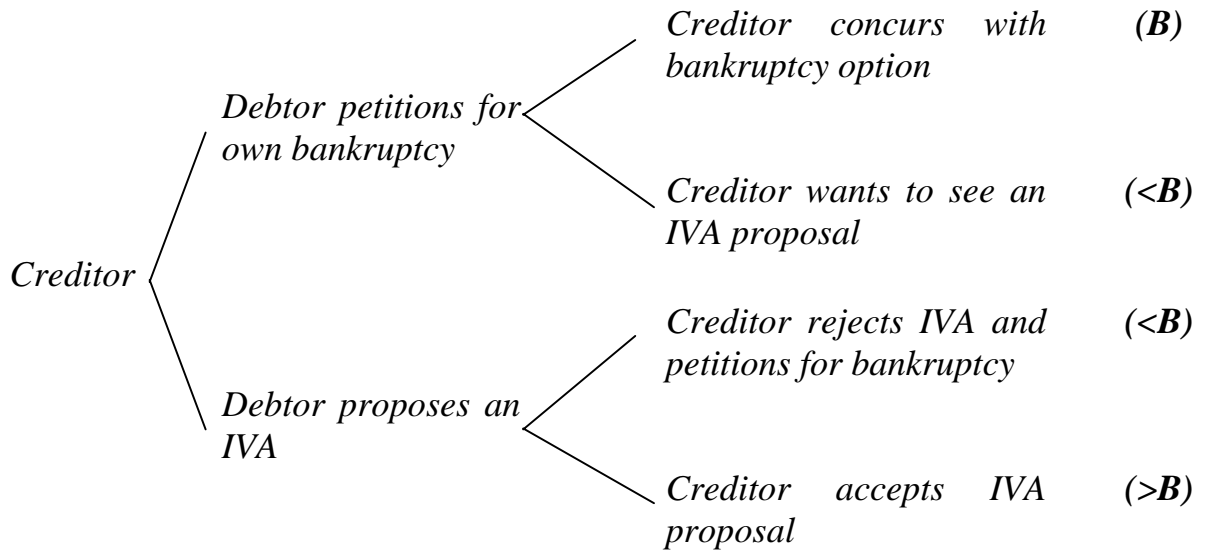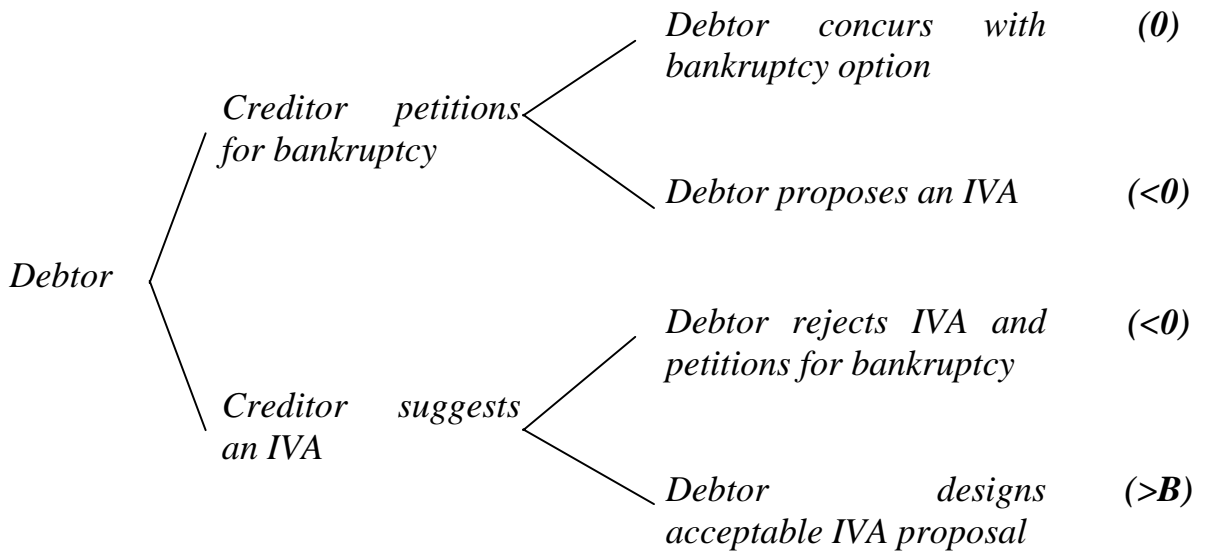
Figure 2: **The Static Insolvency Game**

Debtor

	IVA	Bankruptcy
IVA	(>B-B) / >B	<0 / <B
Bankruptcy	<0 / <B	0 / B

Creditor

Figure 3   Extensive form of the static insolvency game

(a) Creditor strategies (Debtor moves first)

Creditor concurs with bankruptcy option   ***(B)***

Debtor petitions for own bankruptcy

Creditor wants to see an IVA proposal   ***(<B)***

Creditor

Creditor rejects IVA and petitions for bankruptcy   ***(<B)***

Debtor proposes an IVA

Creditor accepts IVA proposal   ***(>B)***

(b) Debtor strategies (Creditor moves first)

Debtor concurs with bankruptcy option   ***(0)***

Creditor petitions for bankruptcy

Debtor proposes an IVA   ***(<0)***

Debtor

Debtor rejects IVA and petitions for bankruptcy   ***(<0)***

Creditor suggests an IVA

Debtor designs acceptable IVA proposal   ***(>B)***

BOX 1

WHAT IS AN IVA?

IVAs are private "contracts" for the satisfaction of debts, entered into by insolvent debtors and their creditors, pre- or post- bankruptcy. In this court-supervised and protected procedure *(interim order)* the debtor proposes how the debts are to be satisfied *(proposal)*, under the guidance of a licensed insolvency practitioner *(nominee).* The creditors are given the opportunity of accepting or rejecting the proposal *(creditors' meeting).* At the meeting the creditors have the opportunity to offer modifications to the proposal that the debtor can accept or reject. Once agreed and accepted by at least 75 percent by value of creditors attending the creditors' meeting the IVA is binding and the proposal is given effect by the insolvency practitioner *(supervisor).* Accepted IVAs have the effect of either overturning a bankruptcy order, dismissing a bankruptcy petition or halting other legal action by a creditor to recover a debt.

IVA legislation is covered in Part VIII (Sections 252 to 263) of The Insolvency Act 1986 and Part 5 of The Insolvency Rules 1986 (as amended).

TABLE I

IVA failure risk factors

Chi - square

Factor	Fail %	Pearson	DF	Sig.	Comment
Debtor not co-operative	56.8	50.99719	2	.00000	Significant at 1% level
IVA dividend = bankruptcy dividend	66.7	19.44784	2	.00006	Significant at 1% level
IVA div. > 20p more than bankruptcy	37.8	19.44784	2	.00006	Significant at 1% level
Assets / Income <£20,000	39.4	2.70417	1	.10009	Close to significance at 10% level
Creditors not generally supportive	42.9	5.53624	2	.06278	Appears significant at 10% level but 2 cells with observations less than 5
Creditors' support "neutral"	39.7	5.53624	2	.06278	As above
Modifications at creditors' meeting	33.0	0.50755	1	.47620	Not significant at 10% level