

Bankruptcy Discharge and the Emergence of Debtor Rights in Eighteenth Century England

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Abstract:

Bankruptcy is a precise legal process defining the rules when debtor fails to repay their debts. These rules determine willingness to lend and to borrow and thus can affect economic growth. In 1706, the English Parliament passed a bankruptcy statute that provided potential rights for bankrupts and represents a fundamental change in the rules regarding bankruptcy. Where previously a bankrupt could exit bankruptcy only upon full repayment of debts, creditors could now choose to discharge a bankrupt prior to full repayment of his debts. Not only did bankrupts benefit when creditors chose to discharge bankrupts prior to full payment, but also we find that creditors could benefit due to greater asset revelation by bankrupts.

1. Introduction

Bankruptcy denotes failure: an inability to repay one's debts. Although often used colloquially, bankruptcy is a legal process designed to structure the terminal relationship between the firm or person and the creditors. Bankruptcy is a state-sponsored mechanism that solves a collective action problem. In a world without bankruptcy, the creditors would have to negotiate singly or collectively with the debtor for return of monies owing. Such renegotiations are sometimes called 'compositions'. For each creditor to do this alone could lead to a race to acquire all the assets before other creditors. In an environment with a well-defined social order, the more well-connected or powerful might have greater suasion than the less connected; the larger creditors over the smaller. In early modern England, creditors and debtors were free to renegotiate until a commission of bankruptcy was issued. Once bankruptcy was declared, bankruptcy rules determine the size and the division of assets between creditor and debtor, and rights relating to legal exit from the state of bankruptcy.

The rules defined by the state organize this second best situation where the debtor cannot repay the creditor. The rules, therefore, have implications not only for the willingness of creditors to lend and investors to borrow but also for the structure of risk-taking or entrepreneurial activity in the economy and hence for economic growth (White 2007). In discussing a lack of European entrepreneurs, *The Economist* cited, among other factors, the role played by bankruptcy rules and the time to discharge or exit from bankruptcy.¹ Contained within the idea of discharge from bankruptcy is the idea of a fresh start or the freedom to fail. In its examination of the time to discharge from then end of the liquidation process across a range of European countries, relative to the United States, individual bankrupts could expect a discharge in less than one year in the United States and just over one year in Britain but the same process

¹ Labor law and venture capital are also important. "Les misérables", 28th July 2012.

could take six years in Germany, nine in France. In addition, bankrupts in some countries could face continuing sanctions.²

Such differences in treatment reflect a cultural perception of failure: viewing bankruptcy as the result of fraudulent behavior – intending to steal other men’s money versus the result of misfortune.³ These differing perceptions have, in turn, generated laws focused on punishment, on the one hand, to allowing the bankrupt a second chance, on the other.⁴ In this paper, we examine an important legal change to the structure of bankruptcy law that occurred in England in 1706. Prior to this date, bankrupts were presumed to have behaved fraudulently, bankruptcy left the bankrupt with zero assets, and the bankrupt could exit bankruptcy only with full repayment of all debts. 4&5 Anne c 4 “ An Act to prevent frauds frequently committed by bankrupts” and 6 Anne c 22 “ An Act to explain and amend an act of the last session of Parliament for preventing frauds frequently committed by bankrupts”, passed in the following year, changed the landscape for bankrupts in Britain. Despite the language in the titles, Anne 4&5 and Anne 6 provided, for the first time, the potential legal right to exit the state of bankruptcy prior to full repayment of all debts. In addition, the statutes provided the bankrupt with the possibility of an allowance rather than being left with nothing. Discharge, however, required four fifths of the creditors by number and value to agree.⁵ Essentially a discharge meant that the creditors were not only abrogating their legal right to full repayment, but also giving part of the estate back to the debtor. For the bankrupt, a discharge allowed the debtor to use his/her human capital in the economy – a second chance. What is not immediately clear is why creditors would voluntarily agree to a discharge or whether such discharges were ever issued.

The timing of this Act coming as it does in the aftermath of the Glorious Revolution added to a body of legislation that enhanced growth in the capital market and economic activity

² For example, in Germany, bankrupts face a lifetime ban on senior executive positions in big companies.

³ Hoppit, ch 2.

⁴ Such differences in treatment in turn lead to strategic decisions as to where to declare bankruptcy – if one has a choice.

⁵ 4&5 Anne allowed the commission to decide on discharge. 6 Anne made this a decision of the creditors.

overall.⁶ The capital market grew whether measured by number or people, volume of transactions or types of activity; by the end of the eighteenth century, England would be the dominant world power.⁷

Investment depends on access to capital and credit. Yet, provision of capital or credit depends on information regarding the investor or borrower. Historically and currently, family, kin-networks, religious groups have been used to provide information on the person borrowing and thus reduce moral hazard and adverse selection.⁸ Once the borrowing has taken place, family and social networks have been thought of as mechanisms to ensure that borrowers repay their debts. These more personal structures work but they do so by restricting lending to insiders, and as a result other viable investment might be missed.

The tension in all bankruptcy rules is to protect the lender while encouraging risk taking in the economy. Once in default, the law seeks to return to the creditor as much of his assets as possible, which is most easily done if the bankrupt truthfully reveals the location of assets. Knowledge of the extent of remaining assets does not just depend on truthfulness by the debtor but on the success of search by the bankruptcy commissioners. Thus any well-designed rules have a ‘goldilocks’ quality about them: too strict and they inhibit borrowing and too lax they inhibit lending. Blackstone, the leading jurist of the eighteenth century saw the bankruptcy

⁶ There is the chartering of the Bank of England in 1694; the recoinage Act in 1696 which brought all silver coins in circulation to their full face value and in 1704, the Promissory Note Act which established promissory notes as negotiable instruments, creating the legal prerequisites for the use of banknotes as a medium of exchange. In addition, laws prohibiting freedom of the press were repealed.

⁷ Carlos, Fletcher and Neal, 2014

⁸ Moral hazard refers to changes in behavior once that person has the loan, such as using it for consumption rather than investment. Adverse selection refers to the composition of the group seeking the loan, i.e. only poor credit risks try to borrow. Indeed, in its article on European Entrepreneurs, The Economist notes that ‘family, friends and fools’ provide a ready source of cash for would-be entrepreneurs.

statutes as “capital alterations of our legal polity ... highly convenient to that character, which the English now assume, of a great commercial people.”⁹

In this paper, we explore one aspect of the development of a more impersonal credit market, this change in the law regarding the statutory rights of creditors to reclaim their funds. Using a simple game theoretic model of creditor/debtor interaction, we examine the incentives created by this legislation. In our simple game-theoretic world, changes in the penalty faced by the bankrupt encourage more truth-telling or asset revelation as part of the discovery process.¹⁰ Increased truthfulness engendered by the possibility of a discharge relative to the status quo increases the initial payout of assets for the creditor. In contrast, under the status quo, the creditor received a lower initial payout and years of importuning the bankrupt for the remaining debts. We also empirically investigate the extent of discharge using two extant discharge ledgers. In contrast to the prevailing view that discharge was not granted, we find that between 25 and 65 percent of bankrupts in the period immediately following the change in the law were discharged from bankruptcy prior to full repayment of their debts, while from 1730-1750 over half of bankrupts were discharged. Given the coverage of the few remaining ledgers, our estimates on the rate of discharge represent a lower bound. These discharged bankrupts were free to resume commercial activities and case studies show that at least some did so.

Our model illustrates that creditors could benefit from the expansion of debtor rights under the new bankruptcy legislation, and would have incentives to grant a discharge, giving up the right to full repayment. Furthermore, it is clear from the extant ledgers that creditors responded immediately to the discharge provision in the legislation. These results represent an important contribution to our historical understanding of the impact of the legislation in early

⁹ Quotation from Jones, *Foundations of English Bankruptcy*, p. 7.

¹⁰ By lying the bankrupt now loses the right to a discharge, an allowance and could face additional penalties.

modern England on the behavior of creditors and the resulting exit by failed entrepreneurs. Moreover, this work represents a contribution of institutional significance in that it shows how the response of creditors to a change that, on the face of it represents the loss of a property right, can benefit them, borrowers, and society alike. In summary, bankruptcy in action in England in the early eighteenth century would appear to match Blackstone's view as a 'capital alteration.'

The paper is structured as follows. We begin with a description of the bankruptcy legislation in early modern England, paying particular attention to the changes in legislation that occurred in 1706. We then present a simple game theoretic framework where we focus on the incentives facing bankrupts under 4&5Anne. In section five we describe the extent of discharge and the networks of debt and credit that are embodied in the data. Here we use the only extant records on conformity and discharge to provide estimates of the number of bankrupts receiving a discharge. We then conclude.

2. Credit, Creditors and Bankrupts in Early Modern England.

Exchange occurs when an individual sees the opportunity for higher returns. Indeed, domestic and international trade has a long history. Equally long is the history of disputes over repayment, lack of payment, theft or default when borrowers looked to gain by renegeing on the contract. The rules developed to reduce, mitigate, or arbitrate disputes are, therefore, important mechanisms to facilitate the willingness of creditors to lend and borrows to borrow. Milgrom, North and Weingast (1990) discuss the role of the law merchant in mediating conflict in the Fairs of Champagne. More recently, Greif (2006) elaborates on the development of the community responsibility system, found through Europe from the eleventh to the fourteenth century, as a mechanism permitting the growth of more impersonal exchange. Central to this system was the

knowledge that if a merchant defaulted, a creditor could seek recourse from any other merchant within the same community as the defaulter. For example, in 1323, William Virgil, a merchant in Dover, confiscated the goods of John de Grantham, a London merchant, in repayment for a debt owed by different London merchant, Henry Nasard (Greif: 222-3). In response, the London community took action to ensure that Nasard repaid his debt. Virgil got his money and de Grantham his goods returned. This system allowed creditor/debtor resolution between any pair of merchants within community even if they did not know one another, because, in essence, the goods of every individual member had been posted as bond for the conduct of any other member.

Such a system became less useful as the range and number of independent traders grew. North (1990:100) has argued that to grow beyond sets of personal relationships “societies need effective, impersonal contract enforcement, because personal ties, voluntaristic constraints, and ostracism are no longer effective as more complex and impersonal forms of exchange emerge.” Indeed, for Greif (228) the community responsibility system is eventually replaced with greater use of Common Law, with merchants registering their credit relations in local courts using their own goods and property as collateral. The use of local courts gave rise to the state as a third party enforcer. Economic growth, however, requires not only the development of anonymous relationships but also the development of structures that guarantee impersonality where impersonality means treating everyone the same without regard to their individual identity, which Wallis (2011) argues, along with security of property rights, ranks near the top of good institutional outcomes ‘in the pantheon of growth theory’. Although impersonality is not a characteristic often associated with early modern England, it is displayed, at least in part, in the bankruptcy statutes.

Bankruptcy Statutes

The procedures, rules and rights of all parties were set out in a series of statutes in continuous operation until the sweeping changes of the mid-nineteenth century; beginning in 1543 under Henry VIII, 1572 (Elizabeth I), 1603 and 1624 (James I) through Anne 1 (1706). See Table 1 for a timeline of bankruptcy legislation in England. These rules defined and underpinned the security of property rights for a sub-class of creditors and debtors.

The first general statute, passed in 1543, set out the procedure. In the event of a failure to repay, any single creditor who made a complaint in writing to the Lord Chancellor set a process in motion.¹¹ In response to the written complaint, the Lord Chancellor was required to create a commission whose responsibility it was to search, seize, and sell all of the debtor's assets, and then to divide the proceeds on an equal pro-rated basis among the creditors. All creditors, regardless of social status, size of the debt, or seniority, received (or were compounded at) the same number of shillings per pound. Creditors could decide not to take part, but if they made that choice they placed at the back of the queue and could only recoup their debts from subsequent earnings or assets of the bankrupt. Under this legislation, every creditor was placed on the same horizontal platform and had the same rights as any other.

Subsequent statutes amended access across a number of areas: occupation, gender, size of debt, nationality and mechanics of procedure, with some broadening access and some others restricting access. 13 Eliz I c 7 (1572) declared that only those debtors who were 'merchant or other person using or exercising the trade of Merchandise way of bargaining exchanging recharge barter Chevisance or otherwise, in grows or by retail, or seeking his or her trade by

¹¹ The law sets out what constitutes an act of bankruptcy such as fleeing the country, closing one's door to creditors, lying in prison. Here we use the term failure to repay as shorthand for this set of actions.

buying and selling' were eligible under the statute (§1).¹² In 1603, I James I c 15 expanded the occupation classes to include scribes and those 'receiving other men's money or estates into his trust or custody'. (§2) The application of the statute by occupation would not change until the sweeping changes of the mid nineteenth century. Under 21 James I (1624) access was restricted even within buying and selling by requiring that the debt owed be greater than £100.¹³ At the same time the statute was expanded to cover both citizen and alien and in all cases the statute covered both male and female debtors and creditors.¹⁴ Thus if the insolvency met these conditions, the rules regarding bankruptcy were available to all regardless of social status, gender, or occupation.

The situation facing a bankrupt was stark. The bankrupt had no legal rights to any personal assets, whether house, clothes or furniture, and no legal exit from the state of bankruptcy until and unless all debts are fully repaid. Until those debts were repaid, creditors had a claim on all future earnings, having the legal right to detain or importune bankrupts or the estate. Such treatment created an incentive for the bankrupt to hide assets or to lie about the extent of assets remaining. Under sixteenth and seventeenth century statutes bankruptcy applied only to persons and not to companies. In addition, no debtor could declare him or herself bankrupt. This could only be done by a creditor.

¹² It is often incorrectly stated that the statute applies only to merchants. In fact, the statute applies to those who made their living by buying and selling which is much broader than how the term merchant was understood in early modern England.

¹³ In real terms, this is the equivalent of £13,930 today. In income value, £2987000. Eh.Net, "How Much is That" accessed 27 April 2015.

¹⁴ Creditors of insolvent debtors not covered by the bankruptcy law were forced to use persuasion or an inefficient race to get to remaining assets before other creditors. For very small loans less than 6d, a small claims court could be used.

Dramatic changes occurred with 4&5 Anne I c 4 and 6 Anne I c 7.¹⁵ Despite a title “*an act to prevent frauds frequently committed by bankrupts*” and a continuity of language about a debtor’s “intent to defraud and hinder their creditors”, what is striking is a recognition that bankruptcy could be the result of “unavoidable misfortunes.” This was a fundamental shift in legal position and reflects a century long discourse on the malfeasant versus the misfortunate bankrupt.¹⁶ The statute made two very important provisions to benefit compliant debtors. It specifically allows for an allowance of five percent of the value of the estate up to £200. More importantly, the statute specifies that if the debtor has been found to have complied with the bankruptcy proceedings and four fifths of the creditors by number and value of debts agreed, the bankrupt would receive a discharge from the state of bankruptcy, with all remaining debts expunged. Compliant referred to the willingness of the bankrupt to work with the bankruptcy commissioners truthfully reveal the extent of his/her assets. For bankrupts who flagrantly and deliberately sought to hide assets or to evade the commissioners, the statute specified a new penalty; such conduct, if proven in a court of law, could result in death.¹⁷ Further regardless of the conduct of the bankrupt, a discharge could not be issued if the bankruptcy was the result of gambling.

Clearly the procedure whereby a letter to the Lord Chancellor from any single creditor results in a writ of bankruptcy being issued was open to malfeasance by third parties. No debtor

¹⁵ Under 4&5 Anne, the decision to award a discharge was left to the Commissioners without input from creditors. 6 Anne (passed the following year) changed this provision and required that a full four fifths of creditors by number and value of the debt agree. If there was no objection lodged, the discharge was granted. If there was an objection, the case would be forwarded to the courts for adjudication.

¹⁶ An obvious question is why the bill was passed in 1706. For that there is no obvious answer. However, the outbreak of plague in mid-century, the Great Fire in 1666, the Stop of the Mint in 1672 and the sinking of the Assyrian Fleet in 1696 together with a growing understanding of probability and a changing perception of the structure of economic growth, must all have contributed to this fundamental shift. See Leonard (2015)

¹⁷ There is some literature pointing to the non-use of the death penalty. There were perhaps six people hanged over the century. They were not hanged for being bankrupts but for theft. At issue is the incentive embedded in the provisions of the act for truthful revelation by bankrupts.

wanted to be declared bankrupt. His or her name, reputation and standing suffered. As Adam Smith wrote, bankruptcy was “the greatest and most humiliating calamity which can befall an innocent man. The greater part of men, therefore, are sufficiently careful to avoid it.”¹⁸ Yet, until 4&5 Anne, there was nothing to prohibit one merchant destroying a competitor’s reputation in this way.¹⁹ 4&5 Anne required that creditors post a bond of £200 which would be lost in the event that the bankruptcy was not proven. The Act also required that the declaration of bankruptcy and all subsequent matters relating to the case be posted on multiple occasions in the London Gazette.²⁰

The changes embedded in the Anne statutes provide the possibility that a bankrupt could emerge from bankruptcy prior to full repayment of debts owing and also emerge with some financial assets. These changes represent a shift from a punitive to a more lenient position regarding the treatment of bankruptcy cases. At the same time, these changes also required creditors voluntarily to relinquish part of their property rights over the bankrupt’s estate rather than leaving the bankrupt with nothing. In order to understand why creditors might be willing to waive full repayment of debts owing, we need to understand the objectives embodied in any set of bankruptcy rules.

3. Simple Theoretical Model of a Bankruptcy

The literature on bankruptcy is extensive.²¹ Bankruptcy rules represent a second-best solution. The first best would have been that the debtor repaid the contract on time. It is only when the contract is not fulfilled, or the creditors realize that even with further time and credit

¹⁸ Jones, p.7.

¹⁹ In working with the Bankruptcy writ ledgers and the London Gazette, Hoppit argues that the number of bankruptcies in the ledgers should be reduced to about three quarters their number as not all resulted in a finding of bankruptcy. This does not imply impropriety but it is still a large number of cases.

²⁰ Writs of Bankruptcy are still posted in the London Gazette.

²¹ See White “Bankruptcy Law” in the *Handbook of Law and Economics* 2008.

that the contract will not be repaid, that we get into the realm of bankruptcy. However, once one is in the realm of the second best, theoretical models “suggest that, except in special cases, no bankruptcy procedures result in economically efficient outcomes along all the dimensions considered” (White 2007: 1034). In a world in which the bankruptcy procedures are known ex ante their very existence, as White notes, creates incentives that might not be in the best interests of the creditors.²²

Hart (1990) argues that well-structured bankruptcy rules should do a number of things in the event of a default. First the procedures should maximize the proceeds paid to the creditor in the minimum amount of time. Thus the search, seizure, sale and division of the bankrupt’s assets should take place expeditiously. Second, the laws should generate incentives to reduce debtor fraud and encourage truthful revelation of the remaining assets. In essence, the bankrupt should work with the bankruptcy courts to reveal all assets. Third, well-structured bankruptcy rules should maintain entrepreneurial talent, skills or human capital by get the bankrupt back into the workforce.²³

To understand how these changes in the statute law affected the behavior of bankrupts, we consider a model with a single, risk neutral creditor who has $M > 0$ in funds available to lend and a single, risk-neutral borrower.²⁴ The borrower has a project that requires $I = 1$ in investment funds. The interest rate is given and the borrower agrees to repay $(1+r)$ at some defined date. The borrower has some continuation payment C which is independent of the investment and reflects some earnings after the end of the contract. Only when the borrower has accepted the loan does the borrower learn his/her “type,” α : α is a binary variable reflecting the

²² Such behaviors include the use of effort by borrowers, whether to default strategically, concealment of firm assets, or the choice to invest in risky or safe assets.

²³ The significant differences across countries in the maintenance of entrepreneurial talent in the event of a default are clearly evident in the table in *The Economist*, Les Misérables.

²⁴ The intellectual origins of this model can be found in Carlos and Lamping, 2010.

borrower's productivity, with $\alpha = \bar{\alpha}$ denoting a productive type and $\alpha = 0$ an unproductive type. We do not allow the borrower to give the money back.

The borrower plays a very simple game as shown in Figure 1. Once the borrower accepts the loan and α is revealed, the borrower decides to invest or not. If the borrower does not invest, s/he consumes the loan; she will not have $(1 + r)$ in repayment at the due date and will be declared a bankrupt. If the borrower learns that his/her $\alpha = \bar{\alpha}$, and if the borrower invests the loan, the investment will either succeed or fail, each with a probability of $1/2$. If the investment is a failure, the borrower is again unable to repay the $(1 + r)$ and will be declared a bankrupt. If the loan is successful, then the borrower is in a position to repay the $(1 + r)$. However, the borrower has a choice. He can tell the truth about the outcome of the loan and repay the full amount owing. Alternatively, he can lie about the outcome of the investment and hide assets. If the borrower lies, he/she will again be declared a bankrupt.

Once a writ of bankruptcy has been taken out against a borrower, the bankruptcy commissioners initiate a search for all of the bankrupt's assets. We assume that the search will uncover if the investment was not made (the loan was consumed) or that it did take place but the assets were hidden (the borrower lies) with probability η , and will fail with probability $(1 - \eta)$. If as a result of the search the borrower was found to have hidden assets then a penalty δ is imposed.

If $\alpha = \bar{\alpha}$ is revealed and the borrower invests, then the s/he will receive $(\bar{\alpha} - (1 + r) + C)$ with probability one half and $(C - (1 + r))$ with probability one half. Thus the expected payoff (prior to the repayment/truth-telling decision) to investing is:

$$\frac{1}{2}(\bar{\alpha} - (1 + r) + C) + \frac{1}{2}(C - (1 + r)) = \frac{\alpha}{2} + C - (1 + r) \quad (1)$$

Assuming that the investment is successful, the borrower must decide whether or not to tell the truth (and repay the loan). The expected payoff from truth-telling is:

$$(\bar{a} - (1 + r) + C) \quad (2)$$

The expected payoff to lying when the investment is successful is:

$$(1 - \eta)(\bar{a} + C) + \eta(\bar{a} + C - (1 + r) - \delta) = (\bar{a} + C) - \eta(1 + r + \delta) \quad (3)$$

The borrower will decide to tell the truth about the successful investment if:

$$\bar{a} - (1 + r) + C \geq (\bar{a} + C) - \eta(1 + r + \delta) \quad (4)$$

Simplifying, the borrower will tell the truth about a successful investment if and only if:

$$\eta \geq \frac{1+r}{1+r+\delta} \quad (5)$$

Truth-telling, therefore, and not surprisingly, depends on the probability that the search will be successful and the size of the penalty. As the probability of a successful search increases, a borrower will be less likely to lie and hide assets. As the size of the penalty increases, the borrower will also be less likely to lie and hide assets.

To put this result in a somewhat different way, a successful investment yields expected profits given by:

$$\max[\bar{a} - (1 + r) + C, (\bar{a} + C) - \eta(1 + r + \delta)] \quad (6)$$

The probability of a successful investment is $\frac{1}{2}$. Combining (6) (multiplied by $\frac{1}{2}$) with the payoff when the investment is unsuccessful in (1), the payoff from investing is:

$$\frac{1}{2} \max[\bar{a} - (1 + r) + C, (\bar{a} + C) - \eta(1 + r + \delta)] + \frac{1}{2}(C - (1 + r)) \quad (7)$$

The key features of the Anne statute were the introduction of the possibility of a discharge for the bankrupt, the granting of an allowance to the bankrupt and the possibility of the death penalty. Each of these changes represents an increase in the penalty for being caught hiding assets. In the most straightforward sense, a person who was caught hiding assets would

lose the possibility of a discharge and the allowance and have to pay a financial penalty. In the more egregious cases of hiding assets, the bankrupt faced the possibility of the death penalty. Together, these should have increased the probability of truth-telling. The increased likelihood of asset revelation by the borrower also benefited the lender.

We have shown that increases in the probability of a successful search, increases in the penalty, broadly defined to include the loss of the allowance provision and the loss of a discharge, increase the likelihood of truthful revelation of assets. We now explore whether these same changes affect behavior in earlier nodes of the game such as the decision to invest or not invest in the first instance. Once the borrower had accepted a loan from ‘friends, family or fools’, α is revealed and the borrower has to decide to invest or not.

We assume that the payoff from not investing does not depend on α since we assume that the authorities cannot observe the actual α . If the borrower decides not to invest and consumes the capital, then the borrower will not be able to repay the contract. At this point, the borrower can lie and say that s/he did invest. We assume that the probability of being caught claiming the investment failed when it did not occur at all is also given by η as assumed above. The return from not investing is:

$$\eta(C - (1 + r) - \delta) + (1 - \eta)C = C - \eta(1 + r + \delta) \quad (8)$$

Assume again that $\alpha = \bar{\alpha}$. Assume also that (5) holds, so that if the investment is successful, then the borrower tells the truth. Using (7) with truth-telling as the payoff from investment and (8) as the payoff from absconding, the borrower will invest if:

$$\frac{\bar{\alpha}}{2} + C - (1 + r) \geq C - \eta(1 + r + \delta) \quad (9)$$

Or if:

$$\frac{\bar{\alpha}}{2} - (1 + r) + \eta(1 + r + \delta) \geq 0 \quad (10)$$

Note from (10) that if (5) holds (tell the truth if the investment is successful), then (10) must hold as well. That is, (5) is a sufficient condition for (10) to hold. Thus, if $\alpha = \bar{\alpha}$, then (5) is sufficient for the borrower to actually make the investment *and* tell the truth if the investment is successful.

Finally, we can consider the first stage in the whole decision process (whether or not to take out a loan), and analyze whether or not the search and penalty parameters deter socially efficient investments. Like the probability of a successful investment, let the probability of drawing $\alpha = \bar{\alpha}$ equal $\frac{1}{2}$. Then, the ex ante probability of a successful investment is $\frac{1}{4}$, the probability of drawing $\alpha = \bar{\alpha}$ times the probability of a successful investment. Investments are socially optimal ex ante if:

$$\frac{\bar{\alpha}}{4} \geq (1 + r) \quad (11)$$

Assume (5) so that the borrower will undertake an investment and report the truth if he draws $\alpha = \bar{\alpha}$. Then, using earlier results, a borrower will only take out a loan if the expected payoff from drawing $\alpha = \bar{\alpha}$ plus the expected payoff from drawing $\alpha = 0$ is non-negative:

$$\frac{1}{2} \left(\frac{\bar{\alpha}}{2} - (1 + r) \right) + \frac{1}{2} (0 - \eta(1 + r + \delta)) \geq 0 \quad (12)$$

This implies:

$$\frac{\bar{\alpha}}{4} \geq \frac{1+r}{2} + \frac{\eta(1+r+\delta)}{2} \quad (13)$$

Note that the socially efficient cut off, (11), and private cut off, (13), are the same if (5) holds with equality. If η and/or δ are higher such that (5) holds with strict inequality, then the private cutoff in (13) is higher than the optimal cut off in (12). Some socially efficient investments are not made. Thus, choosing η and δ such that (5) holds with equality means that only socially

efficient investments take place, that funds are actually invested when drawing $\alpha = \bar{\alpha}$, and that the borrower tells the truth about investment outcomes.

The rules under which agents operate affect how agents operate through the incentives put into place. This very simple model has two important implications for how creditors and bankrupts and for economic growth. First, the prospects of a discharge and an allowance, as well as the threat of the death penalty, create an incentive for asset revelation and truth telling on the part of the bankrupt. As a result, the creditor could receive a larger upfront payment on the debts owed. In exchange for a discharge the creditor relinquished the right to dun the bankrupt for any remaining debt. In so doing, the creditor does not incur the costs of search to find the bankrupt and any hidden assets. So a creditor would, perhaps, be willing to trade off the possibility of the greater upfront payment and discharge, to a lower upfront payment plus the continual search and dunning of the creditor and his estate for the remainder of the debt. Although the simple model is a one-shot game, in a world where the creditor lends over time, being known as ‘grasping’ (i.e. not giving the discharge) might discourage future business. Thus there seem to be financial reasons why a creditor might grant a discharge. Without personal letters or journals we cannot say why any particular creditor would agree to issue a discharge. Second, the model predicts, under certain conditions, an increase in socially efficient investment within the economy which will generate increased economic growth. Higher asset revelation and more socially efficient investment are conditioned on the more successful search and the penalties for non-compliance. Yet all is predicated on there being the possibility of discharge. Thus, we now examine the extent to which discharge actually occurred.

4. The Extent of Discharge

There was a formal three-part procedure to receiving a discharge. First, the bankruptcy commissioners determined if the bankrupt had complied with all that was required of him or her in the bankruptcy proceedings. Had the bankrupt handed over the books of the business; supplied all known assets; answered all questions? If the commissioners deemed that the bankrupt had behaved appropriately and conformed to the requirements of the statute, the creditors were then asked if they agreed. If four-fifths assented and signed off, then a Certificate of Conformity was issued and sent to the Lord Chancellor who would issue the writ of discharge. Nothing in the statute forced creditors to grant a discharge. In its Glossary of Bankruptcy Terms describing the Certificate of Conformity, the National Archives writes: “creditors frequently withheld consent until they had been paid what they considered a reasonable proportion of their debts and many, it is said, refused for spite or because they thought bankrupts had acted fraudulently.”²⁵ The obvious implication is that the probability of a discharge was low.

The extent to which discharge actually occurred is an empirical question. Fortunately, two discharge ledgers exist from the first half of the eighteenth century.²⁶ The first ledger covers the period almost immediately after the passing of the 4&5 Anne and 6 Anne from September 1710 to April 1714. The second ledger covers the years from 1733-1751 when the Anne statute would have been in operation for three decades. The benefit of the earlier ledger is that it allows us to see if and to what extent creditors responded to the change in the law and, correspondingly, how quickly bankrupts might have benefited. Both ledgers give the same information on the bankrupt - name, address, occupation and date of issue of the certificate of conformity. The earlier register provides, however, the names of the commissioners involved in each bankruptcy

²⁵ Glossary of Useful Terms, National Archives Kew, Bankruptcy B4 – Certificate of Conformity

²⁶ Register of Certificates of Conformity, 1710-1714 (B5/20) and 1733—1751 (B6/1-4)

case and the names of the creditors who signed off on the discharge. What is not given, with two exceptions discussed below, is the amount of debt owed.

Characteristics of Discharge

The very existence of these ledgers shows that at least some discharges were granted very quickly in response to the passing of the Statute. In the forty four months covered by the earlier ledger, there were a total of 549 certificate entries. Twenty certificates were issued in the last four months of 1710 but double that over the first four months of 1714. In the following three years, there were approximately 160 certificates per year. All but forty of these resulted in the file being forwarded to the Lord Chancellor. These forty cases were forwarded to the courts by creditors for adjudication. In at least some of these adjudicated cases, a certificate of discharge would likely have been issued.

One of the remarkable features of the 1710 ledger is the listing of the creditors by name. See Figure 2 for an example of an entry from one of these ledgers. As a result, each certificate of conformity testifies to the intricate web of debt and credit discussed by Muldrew (1998) for a somewhat earlier period. Given the statute, these creditors must represent at least four fifths of all creditors by number and value. For some entries, the clerk has noted when all the creditors signed or if there were only one creditor.²⁷ There are twenty five cases where only one creditor is listed. Across the four years and 549 certificates, 8,424 creditors are listed - 16 creditors per bankrupt. However, the distribution is skewed with a long right tail on the number of creditors, as shown in Figure 3. There are nineteen cases with sixty or more creditors and two with more than one hundred creditors. If only four fifths of the creditors signed, this is a lower-bound estimate on the number of creditors involved in each bankruptcy. Creditors are predominantly

²⁷ Often the clerk would write ONE to show there was the only creditor. No creditors were listed if the file was challenged and sent for adjudication.

male, with only seven percent female. Indeed, in half of the entries there were no women creditors, but women's presence rose with the number of creditors. So conditioning on there being a women creditor, women comprised 10% of creditors. There are 121 creditors who were illiterate in that they could not sign their names. In those cases, the clerk listed that 'John/Jane Smith' made his/her mark. Women were no more likely than men to be illiterate conditioned on being a creditor. The number of creditors implicated in each bankruptcy points to the collective action problem for creditors. If a creditor decided not to issue a discharge, preferring to dun the bankrupt, then he or she undertakes the search and potentially that information becomes freely available to all. While not considered in the model, it does point to why higher current payout from truth-telling might be the best option.

The occupational structure of bankrupts was, of course, circumscribed by the legislation. Only those who made their living by buying and selling or having use of 'other men's money' could be declared a bankrupt. The law covers wholesalers, retailers, and financial services sector. There were 110 occupations listed; among them, for example, apothecaries, rope-makers, pawnbrokers, chapmen/women, butchers, carpenters, draper, haberdasher, mercer, salter, scrivener, merchant, and goldsmith, among others. The occupational titles document the social stratification of businesses. Merchant referred to someone involved in overseas trade. Such trade presumably had higher entry costs than to be a chapman or peddler. It is tempting to think of some of these occupations as small, however, one has to remember that the legislation required that the debt owed be more than £100 if one creditor and £200 if more than three creditors. All bankruptcy cases listed in the Ledger met that requirement. Of course, the overall debts owing by a goldsmith could be significantly larger than those of a chapman. As described below, Sir Stephan Evance reputedly owed over £100,000 when declared a bankrupt.

Hoppitt (1987) in his detailed study of bankruptcy activity in eighteenth century England notes that seven out of ten bankruptcies were in textiles, food and drink, and the distribution sectors, and one in four was in the production and distribution of textiles. Textiles alone accounted for twenty six per cent of bankruptcies from 1701-1720 and seven out of ten were in the textiles, food and drink, and distribution sectors.¹ Across the 110 different occupations listed in the 540 discharge certificates, just over half of the occupations are in the food, drink, textiles and distribution sectors. Just under one third of the discharges go to merchants, goldsmiths, scribes and factors. There is no reason to believe that the occupational breakdown of overall bankruptcies and the breakdown of discharge should map one to one. Discharge depended on the actions of the bankrupt and the creditors; the source of the bankruptcy such as gambling; and timing played a role. It could be that commissioners or assignees died which would delay the process.

In two (and only two) cases, the amount paid to each creditor is listed. Both bankrupts lived in Bristol. Thomas Collett was a distiller and James Hartum a merchant. Collett's eight creditors received a total of £543:03:00 and Hartum's sixteen creditors £1158:16:03, as shown in Table 2. In Collett's case the lowest amount paid to a creditor was £25 to Henry Pyne and the largest £121:13:0 to Francis Freeman and £118:0:0 to Thomas Cole. In Collett's case the largest two creditors, Cornel Serjean and Mary Knight received £361:00:00 and £230:10:0 respectively, while John Berrow received merely £1:14:04. If these sums just meet the 8/- in the pound to get an allowance, then Collett must have owed close to £3,000 (in 1711 currency) and Hartum £1,375. These are very large sums of money in a world where the annual laboring wage was roughly £20. Looking at the amounts owed, there is a sense that bankrupts might have been seeking credit from a range of people to stave off collapse.

Networks of Creditors and Debtors

The ledger book allows insights into the networks of credit in early modern England. Recognizing that the certificate ledger provides an incomplete listing of bankruptcy in England, the names of the bankrupt and the creditors can be used to assess at least a lower bound on the role of family. For each certificate, we have the name of the bankrupt and at least four-fifths of the creditors. So we asked how often the bankrupt's surname appears in the list of creditors. Here we are assuming that the same last name implies a family connection. Obviously this misses all connections from the maternal line. In 156 cases out of 549, the same last name appears both for the bankrupt and in the list of creditors. Thus in 28% of the cases, we see the same surname. It is not at all surprising that bankrupts were borrowing from family. Family is still an important source of loanable funds today. What is interesting is the situations where there are very few creditors listed and one still finds a family name. One example is John Perry. In his case there are only two creditors listed. So we must presume these are the only creditors and one of them is a William Perry. In the case of Jasper Whitter who had seven creditors listed, two had a last name of Whitter – Trisham and Trisham junior. It is important to recognize that while family and friends might have been able to bring more suasion to bear, the formal system was there to provide legal recourse when the informal failed.

The over eight thousand creditors involved in these 549 bankruptcies shows the extent of commercial relationships. Each bankrupt was in all likelihood not only a debtor but also a creditor. So when a merchant was declared bankrupt, his assets and loans outstanding became part of the estate. His loans outstanding needed to be collected to pay back his creditors. To the extent that the bankrupt's debtors could not repay their loans to him, they too could be declared bankrupt. Again recognizing that this ledger provides a very partial picture of the links into the

commercial sector, we ask how many times a bankrupt appears as a creditor in another bankrupt's case. Obviously the more common the name, the more often we might expect that name to be in the list of creditors. Take the example of John Smith. A John Smith turns up as creditor in fourteen other bankruptcies. For the less common names, such as John Tenison or Joseph Pereira, it is more likely that we might be finding the same person. In the case of John Tenison who is the third certificate dated 30th September 1710 has himself 28 creditors, none of whom have the same surname. But John Tenison is listed as a creditor for Alexander Reed and James Reed (late of Dublin, Ireland) copartners. The relationship between these two cases is very clear because the creditor entry in the Reed bankruptcy is listed as: "Nathaniel Newnham and Richard Cocke assignees to a commission of Bankruptcy against John Tenison." Thus the search and seizure of Tenison's assets are looking to the estate of the Reed partners. The bankruptcy of Joseph Pereira (5th October 1710) is also of interest because he would have been part of the Sephardic community in London. His name appears into two other bankruptcy cases, that of "Francisco Soares alias Solomon de Chaves, and Manuel Corea Pinto" (8th April 1711) and Leon Caracosa (11th January 1714). In all, we find the bankrupt appears as creditor in 121 other bankruptcies or one in every five cases listed. Thus bankruptcy of any one person had an unravelling impact on the structure of credit within the mercantile community. It is thus not surprising that bankruptcy would be a last resort by creditors in reclaiming debts owed.

Rate of Discharge

To provide a context for whether the number of discharges is large or small, we compare the number of discharges relative to the annual number of bankruptcies. The number of bankruptcy writs issued from the Bankruptcy Docket Books from 1710-1714 was roughly 250

writs issued per year.²⁸ A simple estimate of the yearly flow of bankruptcies compared to the yearly flow of discharges over these four years implies that about 65% or two-thirds of those entering bankruptcy were discharged. But this is an upper bound. The change in the legislation meant that the stock of bankrupts eligible for discharge was, in effect, the population of living bankrupts. All declared bankrupts were eligible for a discharge under the new legislation.²⁹

Hoppit (1987) provides the most comprehensive accounting of the number of bankruptcies from 1688 to 1800. Rather than look across the long eighteenth century, we consider the shorter period from 1688 to 1714 first. Summing his data from 1688 to 1705, there were 992 bankruptcies. The number of bankruptcy writs issued increases after 1705. From 1706 to 1710 there were an additional 1500 bankruptcies with over 500 occurring in 1706 alone. This increase is probably due to the wording of the 1706 statute. As noted earlier, 34&35 Anne gave the power to grant a discharge solely to the Commissioners. In 6 Anne, passed the following year, that power was returned to the creditors in the sense that they had the power under the status quo. Perhaps some bankrupts colluded with a least one creditor to get a writ issued in this year recognizing that the creditors would appeal their exclusion in the granting of a certificate of conformity. If we use the 992 bankruptcies from 1688 to 1705, the rate of discharge is 55%, but falls to 21% of bankrupts discharged if we use the whole population of bankrupts from 1688 to 1714.

The true rate of discharge must lie somewhere within these bounds. A discharge rate of fifty to sixty percent will have a different impact on risk taking and entrepreneurial activity than it is twenty percent. The stock of bankrupt eligible for a discharge would decline with the passage of time due to death of the bankrupt. As a result, the discharge rate will depend on the

²⁸ Need to give the call number here from biblio

²⁹ See the case of Daniel Defoe discussed below.

bankruptcies taking place in the prior few years.³⁰ In order not to be confounded by the extant stock of bankruptcies prior to the Anne legislation we consider the rate of discharge three decades after the passing of the legislation. Using Hoppit's data on the number of bankruptcies by year and relating this to the numbers of certificates of conformity issued between 1730 and 1750, we obtain a discharge rate of 50%. If some bankruptcies were the result of fraud, theft or gambling, then the rate of discharge for the honest misfortunate bankrupt would be higher and it is the honest misfortunate bankrupt that one wants to treat leniently. Thus it appears that creditors responded very quickly to the change in the legislation and allowed possibly over half of all bankrupts to exit bankruptcy prior to the repayment of all debts owing.

Hart (1990) argues that well-structured bankruptcy rules should maximize the proceeds paid to the creditor in the minimum amount of time should maintain entrepreneurial talent, skills or human capital by get the bankrupt back into the workforce. The granting of a discharge allowed former bankrupts the possibility of a second chance. Yet there is also heterogeneity in the bankruptcy experience that must be acknowledged. Here we provide a number of case studies that show various facets of the nature of bankruptcy, conformity and return to the investment pool

5. Case Studies

Probably one of the more famous seventeenth century 'bankrupts' was Daniel Defoe who is best known today for his novels, *Robinson Crusoe* and *Moll Flanders*, and political writings.

Defoe was born around 1660, educated with the intention that he enter the Presbyterian ministry

³⁰ Obviously the speed with which the process takes place matters to both the bankrupt and to the creditor. In another paper, we examine this question, using the bankruptcy writ ledgers, the London Gazette and the Discharge date to determine how long the process took. It will also allow a more complete matching of the actual bankrupt to the discharge ledger.

but he decided to be an overseas merchant. He began investing in ships and an import/export business in tobacco, wine, spirits and cloth goods. Unfortunately, he was a risk-taking businessman, best exemplified by his purchase of 70 civet cats and his unsuccessful attempt to make perfume from their musk-like secretions. (Quilter: 55). Equally unsuccessful was his attempt to build a diving bell to search for shipwrecks. He was declared a bankrupt in 1692 for owing £17,000 (ODNB).³¹ With the passage of 4&5 Anne, he tried to obtain a discharge in 1706 when it could be issued by the commissioners, which did not happen. He never subsequently petition for a discharge.

In 1712 a writ of bankruptcy was issued against Richard Towne, a tallow chandler. What we know of this bankruptcy comes from the records of the Old Bailey. Clearly, Towne, rather than complying with the commissioners and documenting remaining assets, decided to abscond. According to the record, Towne tried to flee to Holland with all his assets and his account books. Towne was not a good traveler and as he leaned over the side of the boat, money bags in his coat fell overboard. Then the weather turned bad and the boat put back to dock, where Towne was arrested, found to have jewels and account books on his person, and arraigned at the Old Bailey. He was found guilty of deception and theft, and hung.

Sir Stephan Evance was a goldsmith banker. In the aftermath of the Glorious Revolution he was one of the main domestic lenders to the crown. During the 1700s, he undertook a number of unsuccessful private investments insuring merchants. He was declared bankrupt in early 1712, reputedly owing over £100,000. Rather than face the bankruptcy proceedings, he hung

³¹ It is not clear if a writ of bankruptcy was issued against Defoe in 1692. It seems more likely that he attempted several compositions with his creditors. The entry in the Oxford Dictionary of National Biography suggests this and also states that in 1706 owing over £2,000 he chose to submit to a commission of bankrupts. He, however, never received a discharge.

himself in the home of Sir Caesar Child, in March 1712. Sir Caesar Child was both a relative and a creditor.

Not all bankruptcies resulted in the death of the bankrupt. The case of Johanna Cock provides insight into the process where the bankrupt complies with or conforms to the commissioners' requests. Johanna Cock was a broker/dealer in joint stock company shares. She acquired her shares in 1713 on the death of her husband, a wealthy merchant. In his will, he bequeathed £5,660 book value of Bank of England shares to his wife. From 1713 to 1720, Johanna built her brokerage business. In 1720, she was the thirteenth largest purchaser of bank shares and the twenty first largest seller by book value; there were over two thousand buyers and sellers. In total, she sold £36,230 book value of shares with a value per transaction of over £1,200. Over the course of the same year, she handled £48,000 of East India company shares. In November 1720, a note appears in the Bank records that she had been declared a bankrupt.³² We do not know what caused this bankruptcy, though she was buying in a declining market and we know that she had bills owing to Dutch merchants.

In Johanna's case, a notice of the bankruptcy writ appeared in the London Gazette on December 20th 1720. It gave the dates, times and place for presentation to the commissioners of debts owing. It also stated that any debts in Dutch had to be translated and notarized. An entry in the Gazette on December 12th 1721 gave notice of a first dividend payment to all creditors scheduled for 12th January 1722. It also stated that any creditors who had not yet proved their debts could still be included. In April 1722, a further notice appeared in the Gazette. It stated that after inspecting some of the depositions, the Commissioners believed that "several persons had proved larger Debts upon Bills of exchange indorsed than were really due to them, and other have since their proving their Debts received a considerable part thereof from other persons; that

³² Need to footnote women shareholder paper.

equal justice may be done to all the said Bankrupt's Creditors, and a speedy Distribution may be made, all creditors were requested to turn up at the specified place to reprove their debts. Two phrases stand out. The first is 'equal justice' and the second 'speedy distribution'. The first is critical to the operation of impersonality as Wallis defines the process and the second is critical to get capital and entrepreneurial talent back into the economy. A certificate of conformity was gazette on 28th May 1723. Johanna Cock, however, never returned to her business life.

The case of Thomas Griggs provides an example of a bankrupt who did return to business. Thomas Griggs was born in 1701 and, according to Burley (1958) was probably apprenticed in the worsted industry sometime in the next decade. He began his career as a yarn-dealer but account books relating to his operation suggest that his capital resources and scale of operations were too small. He was declared a bankrupt and, according to Burley, paid his creditors at 7/6 in the pound. Using money he subsequently received from an uncle he opened a grocer shop and six years later went back into the textile trade. This time he was very successful. At the time of his death in 1760, he left an estate of £8,000.

6. Conclusion

Bankruptcy rules matter. Although bankruptcy is something that affects only a small proportion of borrowers, the rules themselves affect the investment climate. The more stringent are the rules, the less likely is someone to take a risk and as a result some potentially positive investments will not be undertaken. The rules will also determine how someone behaves in the state of bankruptcy. The more stringent are the rules, the more likely is a borrower to try and hide assets and, indeed, to try and not enter the bankrupt state. As a result, the creditor might have to search for assets and to experience a lengthier time to even partial repayment.

Countries differ in terms of the severity of their bankruptcy codes. In this paper we explored a major change in English bankruptcy law. In 1706, bankruptcy law allowed for the possibility of a discharge from the state of bankruptcy prior to full repayment of debts owing. The statute also allowed for an allowance to be paid to the bankrupt. Thus a bankrupt could emerge from a state of bankruptcy with some capital which could potentially be used for re-investment in economic activity. But this change required that creditors voluntarily relinquish rights to part of their estate owed to them. We provide a very simple game-theoretic framework that showed how such a change would affect a bankrupt's conduct and how such a change would affect the very decision to invest. We show that an increase in the size of the penalty, in this case the loss of the discharge and the allowance, increases truth telling and asset revelation by the bankrupt. We also show that, under certain circumstances, that same increase in the penalty will change the level of investment in the economy, increasing the range of positive investment outcomes.

There is little doubt that England's growth increased over the eighteenth century. Many forces contributed to the increased rate of growth. We suggest here that the changes in the laws regarding bankruptcy must also have contributed to that growth. The rise of discharge not only encouraged more investment but the willingness of creditors to grant discharge led to the return of creditor assets and entrepreneurial talent to the economy.

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- 13 Eliz.I c 7 An Act touching orders for bankrupts
- 1 Jac I c. 15 Act for the better relief of the creditors against such as shall become bankrupt
- 21 Jac I c. 19 An Act for the description of a bankrupt and relief of creditors
- 4&5 Anne c. 4 An Act to prevent frauds frequently committed by bankrupts
- 6 Anne c. 22 An Act to explain and amend an act of the last session of Parliament for preventing frauds frequently committed by bankrupts

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Figure 1—Game Tree

Learn $\alpha = (0, \bar{\alpha})$

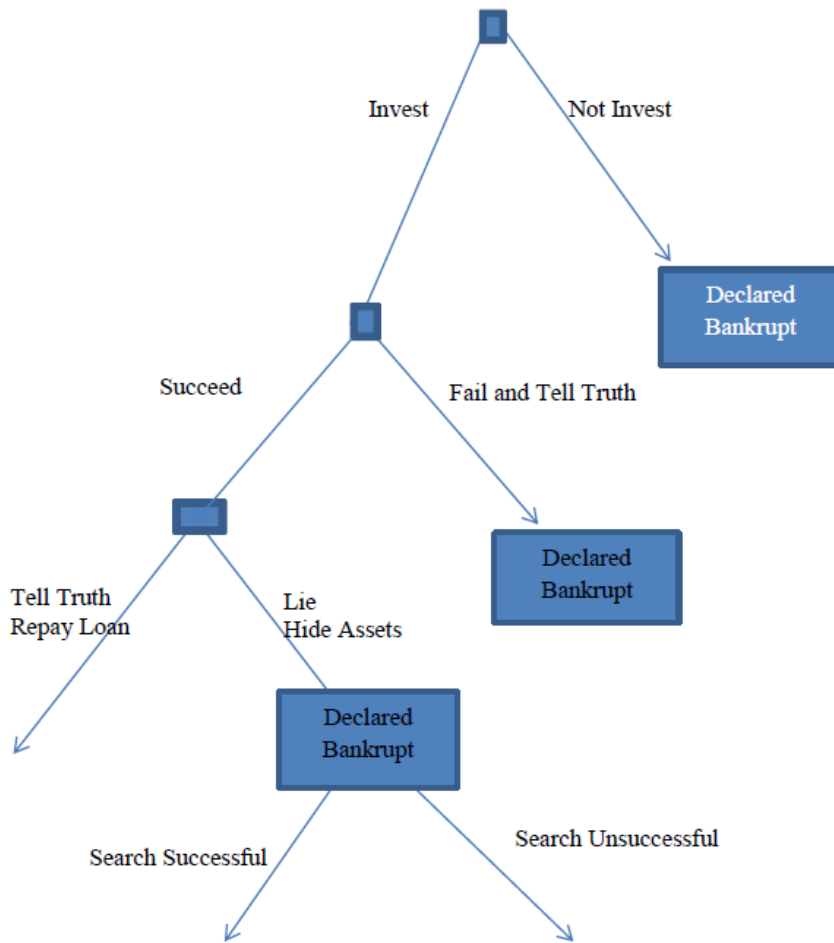


Figure 2—Sample Entry from the Register of Conformity

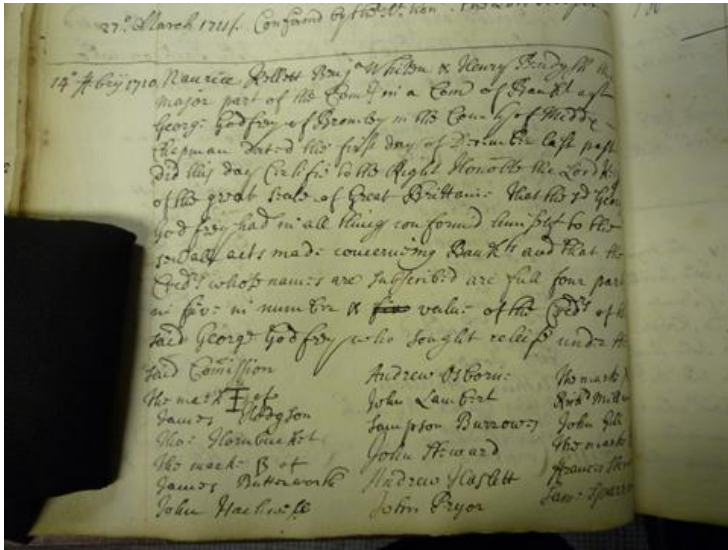


Figure 3—Distribution of Cases by the Number of Creditors

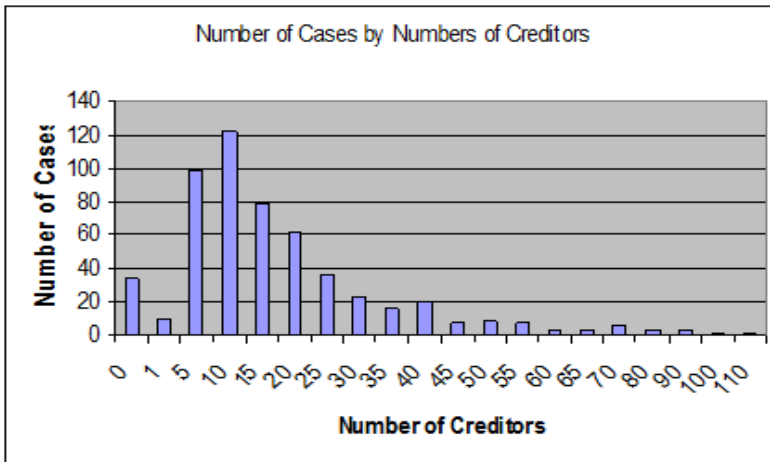


Table 1—Timeline of Bankruptcy Statutes in England

Bankruptcy Statute	Year Enacted
34 & 35 Henry VIII c 4	1543
13 Elizabeth I c 7	1572
1 James I c 15	1603
21 James I c 19	1624
4 & 5 Anne I c 4	1706

Table 2—Payouts from Two Estates

Estate	Creditor	Amount	Total
James Hartum	Francis Freeman	121:13:00	
	Thomas Cole	18:00:00	
	Philip Tailer	75:00:00	
	Stephen Richardson	57:00:00	
	Edward Freeman	54:10:00	
	William Williams	50:00:00	
	Manaseth Whitehead	44:00:00	
	Henry Pyne	25:00:00	
			545:03:00 (1362:00:00)
Thomas Collett	Cornel Serjean	361:00:00	
	Mary Knight	230:10:00	
	Francis Pinnell	90:14:00	
	Benjamin Turner	68:02:11	
	Francis Whitchurch	66:02:02	
	Mary Fisher	50:00:00	
	William England	50:00:00	
	John Froman	43:17:03	
	Benjamin Paget	31:00:00	
	John Cullett	27:08:03	
	Thomas Cadwallader	14:00:00	
	Arthur Plomer	13:06:04	
	Daniel Hoch	4:08:06	
	Elizabeth Arnald	4:07:06	
	John Shettleworth	4:05:00	
John Berrow	1:14:04		
			1158:16:03 (2900:00:00)

