

The Economics of Covenants as a Means of Efficient Creditor Protection

Klaus M. Schmidt*

1.	Introduction.....	87
2.	Agency problems induced by a debt contract.....	88
3.	Covenants and renegotiation.....	89
4.	How to make creditor protection more efficient.....	91

Abstract

Covenants are a means to mitigate the agency problems between borrower and lender that are induced by the allocation of cash flow rights in a debt contract. This comment shows that if covenants could be renegotiated without any transaction costs they could be used to induce efficient behaviour on the part of the borrower and to fully protect lenders. Due to problems of asymmetric information, collective action and hold-up, however, covenants are imperfect. The analysis suggests several ways to improve the functioning of covenants.

Keywords: Covenants, creditor protection, agency costs of debt, renegotiation.

1. INTRODUCTION

Covenants are the prevalent and most important means of creditor protection in the United States. William Bratton¹ offers a brilliant analysis of the role of covenants that is rich in legal and historical detail and that describes and explains the evolution of real world contracting practices and the levels of various forms of covenant protection as a reaction to economic developments. The main purpose of this comment is to complement Bratton's analysis by having a closer look at the

* Prof. Dr Klaus M. Schmidt, Department of Economics, University of Munich, e-mail: klaus.schmidt@Lrz.uni-muenchen.de. Financial support by the Deutsche Forschungsgemeinschaft through SFB-TR 15 is gratefully acknowledged.

¹ W.W. Bratton, 'Bond Covenants and Creditor Protection: Law and Economics, Theory and Practice, Substance and Process', in this volume.

agency problems that covenants are supposed to solve. I will argue that all of these agency problems stem from a fundamental conflict of interests between creditors and debt holders that is induced by the allocation of cash flow rights through a debt contract. Then I will show how a covenant would solve this problem in an ideal world in which contracts can be renegotiated efficiently and without any transaction costs. In the real world, however, covenants will be imperfect. Nevertheless, the analysis suggests several possibilities that could be used to improve the functioning of covenants.

2. AGENCY PROBLEMS INDUCED BY A DEBT CONTRACT

Covenants are a means to protect creditors against various forms of opportunistic behaviour on the part of debt holders: claim dilution, asset withdrawal, underinvestment and asset substitution.² From an economic perspective, all of these agency problems stem from the same fundamental conflict of interests between borrowers and lenders. This conflict is induced by the allocation of cash flow rights in a debt contract. If the borrower is successful and can repay his debt, the lender receives a fixed return while the borrower gets all of the remaining profits. If the borrower fails and defaults on his debt, the lender can seize the assets of the borrower's firm that are not reserved for lenders of higher seniority while the borrower gets nothing. Thus, any action that increases the firm's risk by increasing its returns in case of success and reducing them in case of failure is to the benefit of the borrower at the expense of the lender. Similarly, any action that shifts assets that the lender can seize in case of default to the borrower or to new lenders is beneficial to the borrower and detrimental to the lender. This is exactly what is going on in the four agency problems mentioned above:

- Claim dilution: If the firm takes up additional credit to invest in new investment projects or to pay out dividends to shareholders, it makes default more likely and reduces the claims of the original lender in case of default.
- Asset withdrawal: If the firm sells some of its assets and transfers the proceeds to its shareholders, it again reduces the collateral of the lender.
- Underinvestment: If the firm is worth less than its outstanding debt, the borrower has no incentive to invest in profitable investment projects because all the returns would accrue to the lender. His inaction reduces the value of the debt held by his creditors.
- Asset substitution: The borrower has an incentive to invest in very risky projects even if their expected return is negative. The borrower benefits from the investment in case of success and is protected by limited liability in case of

failure. Thus, most of the gains of the investment accrue to the borrower, while most of the losses are borne by the lender. If the firm is close to bankruptcy, this form of 'gambling for resurrection' is particularly attractive to the borrower.

Obviously, the higher leveraged and more risky the firm, the stronger is this conflict of interests.

It is important to note that these agency problems not only cause a redistribution of wealth from the lender to the borrower, but also give rise to substantial efficiency losses. If redistribution was the only effect, the lender could be protected by a higher interest rate as an *ex ante* compensation for the expected expropriation in the future. However, the problem is much more difficult, because the opportunistic behaviour of the borrower may destroy some or all of the surplus that could be generated. First of all, bankruptcy is (*ex post*) inefficient and leads to a substantial destruction of the firm's value. Thus, if the opportunistic actions of the borrower increase the probability of bankruptcy, they increase the expected efficiency loss due to the possibility of default. Second, if the borrower invests in a very risky project, he destroys value if the project has a negative net present value. Finally, and perhaps most importantly, it may be impossible to finance an efficient investment project if the opportunistic behaviour of the borrower cannot be prevented. Thus, from an *ex ante* perspective, it is in the *joint interest* of creditor and debtor to prevent opportunistic behaviour.

3. COVENANTS AND RENEGOTIATION

Covenants are a contractual solution to this problem. A covenant restricts the actions that the borrower can take. The desired effect is that it prevents opportunistic actions on the part of the borrower that destroy firm value at the expense of the creditor but to the benefit of the debtor. However, there may be undesired side effects. In an uncertain world, it is impossible to write a complete contingent contract that governs the borrower's behaviour in all possible states of the world. Thus, the same covenant that is intended to prevent an opportunistic action on the part of the borrower may also prevent him from taking an efficient action that would be beneficial for both debtor and creditor. Therefore, renegotiation of covenants is important.

Let us suppose for a moment that there are no transaction costs of renegotiation and that renegotiation would always lead to an *ex post* efficient agreement. In this ideal world, there would be a simple solution to the agency problems of debt. The debt contract would contain a covenant that makes any investment (and any other action) by the borrower impossible. Clearly, this prevents any opportunistic and inefficient action by the borrower. Note, however, that it does *not* prevent efficient investments. If there is an efficient investment opportunity, the borrower

² For a more detailed discussion of these problems, see Bratton, loc. cit. n. 1.

will approach the lender and propose to renegotiate the covenant. Because the investment is efficient, it generates a surplus that can be shared between the two parties. Because both parties have to agree, neither of them will be harmed if the covenant is renegotiated to allow for the investment. Finally, because renegotiation is costless, all efficient investment projects will be undertaken.

However, in the real world, renegotiation is imperfect and hampered by considerable transaction costs. First of all, there are often informational asymmetries between lenders and borrowers. If the borrower is better informed about the characteristics of a potential investment project than the lender, the two parties may be unable to reach an efficient agreement, no matter how the renegotiation process is structured.³ Second, there is a collective action problem between different lenders. The more lenders there are, the more difficult it is to reach an agreement, because each lender has an incentive to free-ride on the concessions made by the other lenders. Furthermore, the provision of information about the firm's investment projects is a public good, and the smaller each creditor, the less of an incentive he has to engage in costly information provision. Thus, many creditors aggravate the problem of asymmetric information.

While asymmetric information and collective action problems may yield an *ex post* inefficient renegotiation outcome, there is also scope for two forms of *ex ante* inefficiency that may arise if the parties anticipate that the original contract will be renegotiated. First, there is a hold-up problem. If the lender has some bargaining power in the renegotiation process, he will get some of the surplus from renegotiation. But this reduces the incentives of the borrower to exert effort in order to find efficiency-enhancing investment projects. Second, there may be a soft budget constraint problem. This is the converse of the hold-up problem. If the borrower anticipates that a debt contract will be renegotiated in order to avoid inefficient bankruptcy, and if he gets a share of the surplus from this renegotiation, he has less of an incentive to work hard in order to prevent default.

How important each of these transaction costs is depends not only on the investment project under consideration but also on the type of lending. For example, if the firm issues a bond, then it has to deal with many different creditors. Because of the collective action problem among bondholders, this makes renegotiation very difficult if not impossible. Thus, less restrictive covenants have to be used that give more discretion (and more room for opportunistic behaviour) to the borrower. On the other hand, bond financing imposes a hard budget constraint on the borrower (and his manager). If the firm does not meet its

³ R.B. Myerson and M.A. Satterthwaite, 'Efficient Mechanisms for Bilateral Trading', 29 *Journal of Economic Theory* (1983) pp. 265-281, show that if there is asymmetric information, then there is no bargaining procedure that allows the parties to reach an efficient agreement with probability one.

financial obligations, it is impossible to renegotiate around inefficient bankruptcy. Thus, the borrower (and his manager) will work harder to avoid default.⁴ Another benefit of bond financing is that bonds can be publicly traded. This allows for an efficient allocation of risk among bondholders. Furthermore, each individual bondholder feels protected because he can exit any time by selling his bond. But, of course, bondholders as a whole cannot exit.

On the other hand, if the firm takes up debt from a bank or from a private lender, it deals with only one or very few lenders. In this case, renegotiation is facilitated because collective action problems and problems of asymmetric information are less severe. Thus, covenants can be more restrictive and more effective in preventing opportunistic behaviour on the part of the borrower. On the other hand, from an *ex ante* perspective, this may be problematic if it gives rise to a hold-up or soft budget constraint problem. Furthermore, the allocation of risk among creditors will be less efficient.

4. HOW TO MAKE CREDITOR PROTECTION MORE EFFICIENT

The economic analysis of covenants suggests several ways to improve creditor protection. First, renegotiation is burdened by informational asymmetries between debtor and creditors. Thus, any measure that reduces these asymmetries would be beneficial. For example, one could think about more informative accounting rules that are specifically designed to address the informational needs of creditors. Furthermore, there may be a role for 'informed lenders', such as venture capitalists who have detailed and specific knowledge of the industry under consideration.

A second option is to try to reduce the collective action problem among creditors in order to improve the renegotiation process. The collective action problem could be mitigated by changing the formal procedures that are required to reach an agreement among creditors. One suggestion is to have a formal renegotiation process (outside bankruptcy) that does not require unanimity to reach a binding agreement but adopts a (super-)majority rule. It has been argued that this facilitates reaching an efficient agreement among creditors. However, this need not be the case. Under a unanimity rule each creditor is pivotal, which gives a strong incentive to vote in favour of an efficiency-enhancing proposal. Furthermore, unanimity protects each creditor against potential exploitation by his fellow creditors, who cannot impose a change in the terms of the debt contract on him. A (super-)majority rule, on the other hand, may invite free-riding (because not everybody has to agree) and could also be used by a majority of creditors to

⁴ This idea is developed formally by P. Bolton and D.S. Scharfstein, 'Optimal Debt Structure and the Number of Creditors', 104 *Journal of Political Economy* (1996) pp. 1-25.

exploit a minority. Therefore, any deviation from unanimity should be considered cautiously and should require the unanimous consent of all creditors *ex ante*, i.e., at the stage of lending.

An alternative possibility would be the formal introduction of a trustee who negotiates with the borrower on behalf of all bondholders. The crucial question is whether the trustee should be allowed to take a decision on behalf of bondholders by himself (which raises obvious agency problems between the trustee and the creditors) or whether any deal with the borrower has to be unanimously agreed upon by all creditors in a final vote. Even with a final vote of all creditors a trustee could be very beneficial in coordinating creditors and preventing haggling between them.

A more radical solution to the agency problems between debtors and creditors would be to change the design of a debt contract. A debt contract allocates cash flow and control rights endogenously. If the borrower can repay, he is the full residual claimant on profits and has the residual rights of control, i.e., he is free to take any decision that does not violate the covenants of his debt contract or any other legal rules. On the other hand, if the borrower defaults, the lender is the residual claimant on profits and takes over control of the firm. This endogenous allocation of cash flow and control rights could be more sophisticated. For example, a contingent covenant could allocate specific control rights contingent on certain performance measures. If the firm is doing well, no covenants are imposed on the borrower. If, however, the firm does not reach certain milestones, the borrower is restricted by covenants that have to be renegotiated. Thus, in these states of the world, effective control is shifted to lenders.

Another example is the use of convertible securities, which are the prevalent form of financing for risky and highly leveraged start-up companies by venture capitalists. With a convertible security, the lender can choose whether he wants the debt to be repaid or whether he wants to convert his debt claim into equity of the firm. This discourages excessive risk taking by the borrower⁵ and induces the lender to get more closely involved into the project.⁶ Financial innovations along these lines deserve much more attention in the law and economics literature.

⁵ See, e.g., R. Green, 'Investment Incentives, Debt, and Warrants', 13 *Journal of Financial Economics* (1984) pp. 115-136.

⁶ See K.M. Schmidt, 'Convertible Securities and Venture Capital Finance', 58 *Journal of Finance* (2003) pp. 1139-1166.