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Revolving Asset-Based Lending Contracts and the Resolution of Debt-Related Agency Problems

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Small firms that do not have access to organized financial markets must often rely on secured commercial loans for their debt financing. In large firms, debt-related agency problems are often resolved through the bond pricing process in the formal debt markets. When these same debt-related agency problems arise in small, private firms, the structure of the secured lending agreement must resolve these problems. This study identifies debt-related agency problems as they exist in private firms and examines how the lending agreement resolves these problems.

INTRODUCTION

Financial theory is usually developed within the context of large, publicly traded firms operating in a perfect market environment. In the Agency literature, much of the work examines the debt-related agency problems associated with the financing of large firms. Small firms, however, do not have access to the formal debt markets and are forced to rely on revolving secured commercial loans for much of their debt capital. In these situations, the secured lending agreement must reduce or eliminate the debt-related agency costs. The purpose of this current paper is to focus attention on how secured loan agreements affect debt-related agency problems in small, privately owned firms.

The paper is structured as follows. In the first section, a general review of the theory of agency is presented. The second section examines revolving Asset-Based Loan (ABL) arrangements used by many privately owned firms as their dominant source of debt financing. In the third section, the debt-related agency problem literature is reviewed and similar problems are identified in firms using ABL financing. It is also shown how the structure

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of the revolving loan agreement resolves these problems without the need of a market pricing mechanism. The final section contains a summary and conclusions.

I. AGENCY THEORY

Accounting Theory of Agency

Baiman [2] defines the basic accounting related agency problem as the construction of a Pareto-optimal employment contract. The ideal contract is a "first best" contract that is self-enforcing and results in an optimal level of effort by the agent and an optimal distribution of risk between the agent and the principal without any associated information or monitoring costs. A "second best" contract is an optimal situation given a specific information set and is a result of the balance between the value added to the firm from the use of additional information and the cost of obtaining that information. Since information is costly, the achievement of a second best contract is considered optimal and is accomplished using managerial accounting systems to gather information and monitor the agent's activities.

Financial Theory of Agency

Barnea, Haugen, and Senbet [4] describe agency problems as productive inefficiencies that arise from conflicting interests of various parties associated with the financing and management of a corporation. The three categories of participants—owners, managers and external financiers—act in their own self interest, thus creating various agency problems.

These agency problems and their resolution within the corporate environment have been examined by a number of authors. Jensen and Meckling [14] discuss how the inclusion of debt in the capital structure of the firm can induce owner/managers to invest in high risk projects in an attempt to expropriate wealth from bondholders. Ross [24] and Leland and Pyle [15] discuss the agency problems associated with the existence of asymmetric information and discuss the role of signaling to the markets in the resolution of those problems. Haugen and Senbet discuss bankruptcy costs as an offset to the tax benefits of debt financing and the implications for capital structure. Myers [16] shows that with debt in the capital structure a firm's owner may underinvest by foregoing positive net present value projects if the incremental benefits associated with the projects accrue only to the debtholders of the firm. Within the Myers framework, rational bondholders recognize this risk and lower the price they are willing to pay

for the bonds, thus forcing owners to bear the associated costs. Barnea, Haugen, and Senbet [5] argue that the pricing mechanism in the formal debt markets resolves this type of problem. Ang [1] examines the opposite case in which a firm overinvests in underutilized physical assets and the market for corporate restructuring resolves the problem. Most of this existing work focuses on the agency problems in large public firms that raise funds from external sources. In these situations, the problems are resolved through the security market pricing function. Many firms, however, do not issue publicly traded securities but still need to obtain debt financing from external sources such as commercial lenders. This situation allows agency problems to develop in an environment with no formal market discipline. In these situations, second-best contracts of the type described in the Accounting literature are needed to minimize the related agency costs.

Small Firm Agency Theory

Research on small firm agency problems is scarce. Hand, Lloyd, and Rogow [11] examine the resolutions of agency problems brought about by conflicts between insider owner/managers and non-insider minority equity holders in the small firm context. They also discuss how a stockholders' agreement that is executed at the time of organization can be structured in such a way as to reduce many of these small firm agency problems. Issues that can be dealt with in the stockholders' agreement include limits on managerial compensation, limits on dividends, and restrictions that guard against dilution of existing shareholders' control over the firm.

Pettit and Singer [22], in a review of small firm research topics, discuss the direct and indirect costs of small firm debt financing. They also note that they know of no existing research focusing on debt-related agency problems in small firms and suggest that the structure of secured, heavily monitored, short term loans to small firms is most likely a response to the need to control these problems. Revolving ABL arrangements have the specific characteristics described by Pettit and Singer.

Constand, Osteryoung, and Nast [8] empirically examine the relationships between small firm characteristics and the use of leverage in firms that use revolving asset-based loans as a source of financing. They interpret their results within the context of large firm agency theory and find that many factors identified by other authors as affecting leverage in large firms do not affect the use of leverage in small firms. These past studies indicate a clear need for an examination of the relationship between agency problems and small firm debt financing.

II. REVOLVING ASSET-BASED LOAN FINANCING

Herskowitz and Kaplowitz [13] describe the revolving ABL process as a financing arrangement in which a bank has agreed to supply continuous secured financing to the borrower over a three to five year period. The financing is collateralized by current assets such as accounts receivable and inventory and the amount of the established credit line at any point in time is based on a percentage "advance rate" of the balances of the eligible working capital assets. The advance rate for eligible receivables is usually 70 to 80 percent of book value; the advance rate for eligible inventory is usually 30 to 40 percent of book value. Since the assets used to secure the loan are highly liquid, the lender closely monitors the activities of the borrower. The ABL process is discussed at length in books by Clark [6] and Robinson [23] and in numerous articles (see Stacy [25], Barbarosh and Tong [3], English [9], Gilbert [10], Herskowitz and Kaplowitz [13], Pendley [17, 18, 19, 20, 21] and Constand [7]).

In a revolving ABL arrangement, the borrower and lender must balance their immediate self interest against the long-term benefits associated with cooperative behavior. For the borrower, the loan covenants and the monitoring activities of the lender may, at first, seem excessive. Furthermore, there are explicit financing costs associated with the financing arrangement. The explicit costs associated with ABL financing are very high and usually consist of paying an interest rate 2% to 4% over the prime rate and paying various fees that cover the costs of the lender's monitoring activities. In most cases, however, the firm's restricted access to the organized financial markets makes the costs associated with formal debt issues or equity even higher than those associated with ABL financing. In such cases, the borrowers have no other rational choice.

Although revolving ABL financing does have disadvantages associated with its structure, it also provides a flexible form of external debt financing for the private firm. Over the short term the amount of funds fluctuates to meet seasonal demands for working capital. Over the longer term, as the firm grows, increased debt financing is made available to fund the required increases in permanent working capital investment.

From the lender's point of view, the lender is at risk for possible losses arising from the activities of the borrower. This risk for the lender arises from a number of debt-related agency problems. Although the lender could avoid these risks by refusing to extend loans to a firm, the lender would also sacrifice the associated fee and interest income. It is in the best interest of the lender to extend the loan and properly manage the associated risk through the structure of the lending agreement.

III. ASSET-BASED LENDING AND AGENCY THEORY

Most firms involved in the ABL process are private corporations whose common stock is not publicly traded and whose debt obligations are usually collateralized commercial loans rather than formal debt issues. This ABL type of financing results in a complex agency relationship with the lender as principal and the borrower as agent. Without the market to resolve agency problems, an ABL Security Agreement must provide a solution. This Security Agreement is a standardized legal document that is structured under Article 9 of the Uniform Commercial Code (UCC). It describes the rights and responsibilities of the parties to the revolving financing agreement and can be considered a second-best contract that significantly reduces debt-related agency problems.

Informational Asymmetry

Informational asymmetry exists when managers (or owner/managers) possess information about the true nature of the firm that outsiders do not have (see Ross [24] and Leland and Pyle [15]). If a firm is privately owned and managed and the owner/manager seeks external sources of funding, this information gap must be bridged by the owner/manager so the true value of the firm is revealed to potential investors. The agency costs associated with this process are borne by the owner/manager.

The owner/manager's choice of external funding is between equity or debt. If equity funding is chosen, there are numerous costs involved. First, there are direct issue costs, such as investment banker fees, associated with identifying potential investors and informing them about the value of the firm. Second, there are indirect issue costs due to the tendency for equity markets to underprice new issues as a result of ambiguous signaling of the firm's true value. Furthermore, there are additional costs such as the portion of future residual profits to be paid to the new shareholders. Finally, the existing tax structure penalizes equity financing through the double taxation of dividends.

If the owner/manager of a privately held firm seeks external debt financing rather than equity financing, the direct issue costs and the indirect costs associated with ambiguous signaling to external debtors still exist. The other costs of equity financing do not apply in that there is no sharing of future residual profits and rather than a tax disadvantage, there exists a tax subsidy from the tax shield effect. Because of these lower costs, debt financing is often preferred over equity issues. However, the cost of issuing debt securities is still prohibitive for relatively small, privately held corporations. Fortunately, the direct costs of issuing formal debt securities can be avoided

if the debt financing is obtained from commercial lenders. With commercial loans, the only costs associated with the existence of asymmetric information are the costs of informing the lenders about the true state of the firm. Furthermore, since commercial lenders work closely with borrowers and have developed efficient methods of monitoring the borrower's actions, the monitoring costs may be less than those associated with small firm debt issues. This point was well made by Hand, Lloyd, and Rogow [11].

If a firm relies on a revolving ABL for its debt financing, two aspects of the structure of the lending agreement reduce the asymmetric information problem. First, the initial audit of the borrower's assets provide the lender with the information required to decide if a loan will be made. Second, the monitoring performed periodically by the lender keeps the lender informed about changes in the borrower's assets.

The initial audit is performed by the lender before the decision to extend a revolving ABL and involves a financial analysis of the firm's accounting records and verification of the assets to be used as collateral. Verification involves on-site visits and telephone interviews with the borrower's credit customers. This initial audit process allows the lender to gather needed information prior to the lending decision, reduces the information asymmetry, and allows a rational debt pricing schedule to be devised. The costs involved with this audit are often included in the loan fee structure or embedded in the interest charges.

Once a revolving credit has been established, the possibility exists that the information gap between the borrower and the lender will increase as time passes. To prevent this from happening, the ABL arrangement requires continual disclosure of firm specific information to the lender. This disclosure process is described in the Security Agreement and requires the borrower to keep extensive financial records and to allow the lender unrestricted access to those records. When revolving ABLs are collateralized by inventory and receivables whose balances change daily, the lender is informed at the close of each business day of the new account balances. This daily reporting allows the lender to recalculate the value of collateral and adjust the lending limits. Furthermore, the process allows the lender to keep fully appraised of the firm's value. The costs of this monitoring process are passed on to the borrower and represent the costs of reducing the asymmetric information problem.

Bankruptcy and Loan Default

One of the debt-related agency costs is the cost associated with bankruptcy. Haugen and Senbet [12] (H&S hereafter) examine the issue of bankruptcy and the resulting impact on the existence of an optimal capital

structure. H&S define bankruptcy as the chain of events in which the firm fails to meet its fixed payment obligations and the firm's creditors take legal possession of the firm. They classify the associated costs of the ownership transfer as direct or indirect. Direct costs are legal, accounting, and trustee fees associated with the transfer of ownership. Indirect costs are the opportunity costs of the interruption of the firm's sales revenues during the ownership transfer. H&S also argue that the decision to liquidate the assets of the firm is a pure capital budgeting decision whose costs should not be included as bankruptcy costs. H&S argue that the owners could avoid the formal transfer of ownership by selling new equity shares and using the proceeds to repurchase the outstanding fixed claims on the firm at a fair market price. With this option, the true costs of bankruptcy would be the lesser of the costs of the forced, formal ownership transfer or the transactions costs of the restructuring of the firm prior to a forced ownership transfer.

The discussion of bankruptcy by H&S is not applicable to firms that rely on revolving ABLs due to the definition of bankruptcy and the process of informal reorganization of the firm. In the H&S scenario, default on the debt agreement precipitates either bankruptcy or an informal reorganization of the firm that avoids bankruptcy. When a revolving ABL is used, default is a separate event from bankruptcy. Furthermore, since the small firm cannot issue formal securities, the firm has no option to reorganize informally.

Default within the context of a revolving ABL is not a generic concept that applies to all firms using debt financing. Instead, the specific actions that constitute default are defined in the Security Agreement that describes the rights and obligations of both parties involved in a particular financing relationship. Legal, accounting, and trustee expenses identified as direct costs of bankruptcy by H&S are actually default related costs when ABLs are used. These various costs are controlled through the ABL monitoring structure.

If an ABL agreement is structured under Article 9 of the UCC and evidence of the agreement is registered with the appropriate governmental agency, the secured lender has established contingent legal rights in the collateralized assets owned by the borrowers. If default occurs the lender can take immediate possession of the assets, liquidate them, and use the proceeds for repayment of the outstanding debt. Since receivables often provide the majority of the ABL collateral, a special deposit account called a collateral account is used to insure that the lender controls the cash proceeds of the collateralized receivables.

The ABL Security Agreement usually requires that all payments on receivables accounts be mailed directly to a lockbox controlled by the lender. The lender endorses the payments and deposits them into the collateral account. Periodically, the balance of this account is applied against the balance of the revolving loan. If the borrower acts in such a way that constitutes default,

legal ownership of the collateralized receivables is immediately transferred to the lender and the lender informs the borrower's account debtors that payments should continue to be made as they have in the past. As the outstanding receivables are repaid, the proceeds are applied against the outstanding loan balance. Since the loan funds advanced only represented 80% of eligible receivables, the entire outstanding loan balance is usually repaid.

Given this aspect of the ABL structure, the legal costs of default are minimal or non-existent. Furthermore, since ownership of the collateralized assets can be transferred to the secured lender without bankruptcy, there are no trustee related costs. Even if bankruptcy occurs simultaneously with default, the legal claim held by the secured lender on the collateralized assets ranks ahead of the claims of bankruptcy trustees and trustee related costs do not impact the debtholders. Finally, since the structure of the lending arrangement requires daily monitoring of the borrower's books by the lender, the accounting costs of default are immaterial.

Investment in High Risk Projects

Jensen and Meckling [14] (J&M hereafter) explain the tendency for owner/managers who operate firms utilizing financial leverage to invest in high risk projects. The use of debt financing by the owner/manager is viewed as a European Call Option on the residual value of the firm. The debt repayment represents the strike or exercise price of the call option and the value of the firm represents the underlying asset on which the call is written. Expiration occurs when the debt used in the financing of the firm matures and must be repaid.

If the value of the firm is greater than the amount of the debt repayment, the owner/manager will repay the debt and claim the residual firm value. If, however, the debt repayment amount is greater than the value of the firm, the owner/manager will default on the debt and the debtors will claim the firm assets as partial repayment of the debt obligation. This decision to default by the owner/manager is similar to the refusal to exercise an out-of-the money call option.

Prior to the maturity of the debt (i.e., the expiration of the call option), the value of the owner/manager's claim on the firm is directly related to the variance of the firm's operating earnings. As the variance of the firm's earnings increase, the value of the call on the residual value increases. Given a choice of two investment opportunities with equal expected returns but different variances, a rational owner/manager will choose the opportunity with the highest variance of returns. There is a greater chance that the residual value of the firm after the debt repayment will be larger than if the investment opportunity with the lower variance had been chosen.

A key factor of this scenario is the separation of the financing decision and the investment decision. The suppliers of debt capital have already committed funds prior to management's investment decision. With the funds in hand, management only considers the consequences of the investment decision. There exists no immediate constraint on management's behavior; they are free to invest in high risk investments.

A similar type of incentive to invest in risky assets may occur when a firm pledges its receivables as collateral in a revolving ABL arrangement. If a lender agrees to accept all current and future receivables as collateral on a non-recourse basis, the lender has essentially agreed to provide debt financing before the actual decision to invest in a particular receivable is made. The owner/manager has the incentive to extend trade credit to customers who have questionable credit reputations, pledge the resulting receivables as collateral, and borrow against these risky receivables without regard to the probability of default. To prevent this from occurring, lenders in revolving ABLs have established a process of screening and monitoring the quality of collateralized receivables. This process links the lender's decision to provide debt financing with the investment to be funded by the loan.

Before the lender accepts a borrower's receivables as collateral, the lender performs an initial screening of the receivable accounts. This screening involves the classification of the receivables as either eligible or ineligible collateral. Some types of accounts, such as intra-company accounts, progress billings, seasonal datings or bill-and-hold arrangements, are immediately considered ineligible as collateral due to their complicated structure and their potential for generating disputes between the lender and borrower. Other receivables are reviewed and may be classified as too risky for collateral if the account debtors' payment habits indicate they are poor credit risks. Only after the eligible accounts have been identified will the lender advance the loan funds and accept the eligible accounts as collateral.

After the initial credit advance, the lender continues to monitor the value of the collateral by reviewing the credit sales related documents that reflect changes in the receivables and by verifying the outstanding account balances. This is done on either a daily or a weekly basis. As new receivables are created, the lender advances additional funds only if the receivables represent sales to eligible account debtors. By structuring the lending agreement in this way, the borrower must make the decision to invest in a receivable with an acceptable level of risk before the additional loan funds are advanced from the lender. If the new receivable represents a high risk, the lender will not accept the account as eligible and will not advance additional funds. This linkage between the investment and financing decision resolves the risky investment problem.

Underinvestment

Myers [16] explains how the underinvestment problem develops when debt financing is used by management. He makes the distinction between investments in "assets-in-place" and investments in "growth opportunities" where growth opportunities are described as options on future assets acquired by the firm. He sets up a two-period example where management will underinvest by foregoing certain positive net present value (NPV) investment projects in which the incremental benefits of the project accrue only to the debtholders.

In his two-period model, Myers defines three points in time. At the beginning of the first period, the firm issues debt to be repaid at the end of period two. At the end of period one, the true value of the firm's investment opportunity is revealed to management and management decides whether or not to invest in the project. Since repayment of the debt is assumed to be supported entirely by the proceeds of the investment, a decision not to invest implies a decision to default on the debt issue at maturity.

When management is required to make the investment decision at the end of period one, it decides based on the relationship between the size of the positive NPV of the investment project and the present value of the debt repayment due at the end of period two. Myers argues that if the NPV of the investment is less than the present value of the debt repayment, management will pass up the investment. Only if the positive NPV of the investment exceeds the present value of the debt repayment will it be in the best interest of owner/managers to accept the project. Within the Myers' framework, the suppliers of debt recognize this potential behavior and adjust the market price they are willing to pay for the firm's bond issues.

Due to the structure of the revolving ABL Security Agreement, this underinvestment problem cannot exist. In the Myers framework the debt is unsecured and the owner/managers receive the loan proceeds prior to the investment decision. In an ABL agreement, the debt is secured by assets such as inventory and receivables accounts. For the owner/managers to qualify for advances against the credit line, investment in the collateralized assets must have already taken place. Without the investment, the extension of additional credit does not occur. Any future investment decisions should have no impact on the repayment of the existing debt. Liquidation of the collateralized assets either through the normal course of business or through bankruptcy induced liquidation will assure repayment of the loan. The problem is resolved ex-ante by linking the investment and lending decision within the revolving ABL structure.

Overinvestment

Ang [1] argues that firms employing debt financing have an incentive to retain physical assets that would be disposed of by a firm financed by 100% equity. The key to the analysis is that much of the risk associated with owner/managers' decisions is borne by the debtholders. If the levered firm owns an underutilized asset the owner/managers have the choice of either selling the asset for a known liquidation value or retaining the asset in the hopes of realizing a greater liquidation value in the future. Ang argues that an underutilized asset can be thought of as a perpetual out-of-the money option and in certain situations, the value of this option to the firm's management is greater than the asset's current liquidation value. If this occurs, the underutilized asset will be retained.

In essence, the Ang argument is similar to the problem of excessively risky investment strategies undertaken by management. Management chooses to speculate in assets whose unknown future value may or may not exceed the current liquidation value. If the assets fail to appreciate in value, or depreciate in value, the value of the firm is decreased and the risk of default on the outstanding debt is increased.

Ang shows that the construction of an optimal debt contract can resolve this overinvestment problem. He argues that the market for corporate restructuring allows ineffective existing debt contracts to be replaced by new, more effective debt contracts that resolve this overinvestment problem.

This overinvestment problem could occur with inventory investments as well as in investments in long term projects. Investment in raw materials would be especially sensitive to this type of speculative activity. In Ang's presentation, the problem is resolved through the construction of an optimal debt contract during the restructuring of the firm. For firms using revolving ABL financing, the optimal contract is the section of the Security Agreement that describes the role of collateralized inventory in the secured loan agreement. The contract not only prevents overinvestment in inventory, but is structured so it also prevents potential abuses of the secured financing process itself.

In addition to the reason for overinvestment, borrowers in a commercial loan arrangement have an additional incentive to overinvest in inventory. If the commercial loan is unsecured, an overinvestment in inventory represents an increase in assets; a process that the lender may interpret as a decrease in the probability of loss if default occurs. This increase in assets may increase the amount of funds that the lender is willing to advance to the borrower. Furthermore, if a borrower has excess inventory on hand and finds that the realizable value of the collateralized inventory has fallen below the amount of the funds borrowed against the assets, there exists the incentive

to continue to hold the inventory. Even if a working capital term loan is collateralized with a blanket inventory lien, the problem still may exist. At the extreme, if the borrower does not consider his operation a going concern, there is the incentive to invest heavily in inventory and other assets, inflate the book value of the assets, obtain term loans by pledging the assets, and default on the loan.

To prevent overinvestment in inventory, the revolving ABL structure includes a system of inventory monitoring procedures. These procedures, outlined in the Security Agreement, are used by the lender to assess the collateral value of the inventory prior to the initial loan disbursement and every three to six months over the life of the ABL arrangement. This collateral value is used to determine the amount of loan funds provided to the borrower.

The first stage in the lender's monitoring of the inventory includes an aging of the inventory accounts and the calculation of inventory turnover. This analysis is usually performed for each of the three categories of inventory: raw materials, work-in-process, and finished goods. The results of the analysis are compared to industry information to see if the borrower's inventory investment activities are similar to those of other firms. Inventory considered too old by industry standards is disallowed as eligible collateral for the ABL. After the inventory accounts have been examined, a physical inspection of the inventory by the lender's audit department is performed to verify the reported quantities of inventory. Finally, the lender obtains an estimate of the liquidation values for raw materials and finished goods. Work-in-process inventory usually has zero liquidation value and is ineligible for use as collateral. Once the lender has identified the eligible inventory, the appropriate advance rate is applied to the book value to determine the amount of loan funds that will be supplied. This advance rate is usually low (30%-40%) and reflects the estimated liquidation value of the eligible inventory.

This loan structure discourages overinvestment in inventory in many ways. First, as noted, inventory classified as too old is not included in the lender's valuation of the eligible collateral. Second, the low advance rate insures that the minimum market value, or liquidation value, of the collateralized assets is large enough to repay the portion of the loan supported by those assets. Third, the low advance rate on inventory and the relatively higher advance rate on eligible receivables encourages owner/managers to increase efforts to sell existing inventory to acceptable credit customers, thus creating new receivables with a greater collateral value in order to secure additional financing. Finally, the security interest held by secured lenders in the inventory of the borrower is usually a blanket lien that extends to all inventory. This structure insures that if overinvestment occurs, the lender has a legal claim against the additional inventory owned by the firm even

though the overinvestment process provides no benefits to the borrower. These aspects of the ABL structure remove the potential gain to the borrower associated with overinvestment in inventory.

IV. SUMMARY AND CONCLUSIONS

Privately owned firms without access to formal securities markets must rely on commercial lenders as sources for their debt financing. Revolving Asset-Based Lending agreements, a form of commercial financing whose use has increased greatly in recent years, are used to structure and monitor secured lending agreements between firms and their debtholders, the commercial lenders. These agreements are complex financial contracts that work to minimize or resolve debt-related agency problems that occur in privately held firms. The costs associated with the resolution of these problems are the monitoring costs associated with the secured lender's activities. These costs are passed on to the borrowers by the lenders in the form of explicit loan fees.

This paper examines the role of ABL contracts in the control of debt-related agency problems. More work needs to be done. There is still a need for a more rigorous modeling of agency problems in small private firms. This modeling should include the linkage between investment decisions and financing decisions. Additional empirical research is also needed in order to examine the validity of both existing and future agency models. Along the same lines, an examination of the use of both secured and unsecured debt may reveal more information about the importance of secured lending contracts in the reduction of agency costs. Hopefully, more researchers will undertake work in this area in the future.

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