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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Workshop an Financial Planning of Industrial Projects Karachi, Pakistan

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche. For an industrial company the problem of financing via long or short term debt is most often solved by the structure and composition of the assets; type of debt oarried depends upon the nature of the uses of funds. Carried to an extreme this axiom of lending stipulates that short term borrowings are properly made to finance short term uses. Similarly long term borrowings are properly made to finance long term uses. The discussion which follows is therefore organized around the definition of three common uses of funds and the criteria for establishing their related debt etructures.

1. Seasonal Uses

Seasonality may be defined as a periodic bulge in the working assets of a company which is necessary to support its normal operations. Typically, this bulge is identified with the expansion of inventory and/or receivables for either of two reasons: 1) sales predictably are greater during one period of the year than another, 2) purchases and/or production of inventory is predictably greater in one period of the year despite constant periodic sales. The first type of seasonality, commonly called seasonal sales, is largely dependent upon the nature of the market demand for the product. The second type, inventory or production seasonality, is dependent upon either the supply of raw materials or the supply of labor necessary for the manufacturing operation.

In both cases the bulge in working assets is expected to be temporary. In the first example inventory is built up in anticipation of the increase in sales. As the periodic sales temporarily increase inventory shrinks and receivables bulge. Eventually the receivables are collected. In the second case inventory is built up in one period and gradually worked down over the fiscal period as sales occur. Because of the constant sales volume, no bulge in receivables normally occurs. In essence the seasonal need for funds is self-liquidating as the increased inventory and receivables are converted to cash. As a result short term debt is the proper financing vehicle for seasonal needs. The seasonality is predictable and the funds necessary to repay the loan are automatically generated by the normal conversion of the assets. The company need not make any profit to repay this loan. Broakeven operations and asset conversion are sufficient for loan repayment.

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If, on the other hand, long term debt were to be used, the company at its seasonal low point would pay interest for funds it did not at that time need. Moreover, the temptation to put these excess funds to work in other earning assets would limit the long term lender's control over the borrower. If the lender, however, were to use 90 day or demand notes it could effectively repossess its money until the next seasonal bulge occurred, thereby preventing misues of funds.

While the primary determinant of the type of debt for seasonal uses has been defined, the question of how much to lend remains. If the lender is certain that the borrower can convert the assets at par, there is no reason why he should not lend 100% of the seasonal increase in assets. Unfortunately, because of the time factor, there will usually be uncertainty. The lender commonly hedges this risk by establishing lending margins in proportion to the risks of conversion. He identifies and evaluates these risks by examining virtually all of the marketing and production aspects of the company, among them the following: volatility of market demand, supply of substitute products, oredit worthiness of customers, terms of sale, length of and value added during the production cycle, quality control, life of the products, delivery schedules, bottlenecks in the production oycle, technological innovations in the manufacturing process, product standardization, etc.

Insight to these risks of operations can be achieved to a certain extent by the application of "statement logic". By examining the historical financial trends of the company through financial statements and in comparison with industry statistics, the risks inherent in conversion of receivables to cash, for example, can be both identified and quantified. The tools of analysis here might include historical receivable turnover compared to terms of sale, delinquency and loss figures if available compared to adequacy of the reserve for doubtful accounts. This qualitative approach to the risks of conversion is essential in the determination of how much short term debt the company can safely maintain.

In marginal situations lenders often hedge their short term risks by taking security for their loans. If asset protection is to be obtained by taking collateral in a seasonal situation, however, the collateral ought not to be the seasonal assets. If the primary risk is the inability to convert assets, then the pledge of those very same unconvertible assets adds no monetary value to the loan;

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if the borrower who is in business to convert those assets cannot convert them, how can the lender, whose primary business is lending money, possibly hope to fare any better. In short, if the assets are not convertible to cash, what purpose does taking them as collateral serve? The answer is control, not monetary value. Assuming the lender properly polices its security, it increases its ability to gear loans to asset conversion. Therefore, seasonal assets are taken not to offset risks of conversion but rather to maintain some control over management. Additionally, the taking of security also prevents the borrower from pledging those assets to another lender, thus avoiding double financing of the assets in question.

II. Fixed Plant Use

Unlike seasonal uses of funds, the investment in plant is generally long term. The specific assets are not, strictly speaking, converted to cash through sale of the assets; rather, they are consumed in the manufacturing process through wear and tear over extensive time periods. Therefore funds borrowed to finance this group of assets cannot be considered self-liquidating. Repayment of these funds must come from the cash flow from operations (profits and depreciation). Since this cash flow can be expected to accrue over a period of years, logically the repayment schedule should also be stretched over a number of years; hence, long term debt is the proper vehicle of financing.

Often the question is raised, "Why not finance fixed assets by constantly rolling over short term debt?" Since ultimate repayment must come from the operational cash flow, the ability to refinance is still tied to profits and depreciation. Moveover, if short term funds are rolled over, management assumes the additional risk of not obtaining the funds each time it goes to the market due to monetary conditions.

Unlike the determinant of how much to lend for seasonal needs, the basis in long term loans is that cumulative cash flow which can reasonably be expected to accrue for debt service over a number of years. Profitability, however, is not solely based on the contribution of plant to the manufacturing cycle; if assets are not converted, there will be no cash flow. Therefore all the considerations discussed in making seasonal loans also apply to long term loans. Add to these the question

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of cash flow and complicate it further by the problem of how many years out one can project these cash flows, and it becomes olear why long term debt is more expensive than short term debt; its repayment is less certain and depends upon a greater number of variables.

The value of security here is clear. Since fixed assets are less easily converted to cash than most current assets, it can be assumed that related security is most often taken as a control factor and is not relied upon as the ultimate source of repayment.

III. Permanent Working Investment Uses

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Working investment may be discribed as the investment necessary in the working assets (Receivables and Inventory) net of related financing (payables and accruals) which is always necessary to support a given level of operations. If sales are expanded, working investment will expand to support the increased level of operations. If sales contract, less working investment will be needed. In short, the relationship between working investment and sales is relatively constant. However, since even in seasonal operations some volume of business is always being generated, there will always be a need for some Working Investment. This base investment is called the permanent working investment need.

Based on the foregoing, if a company is experiencing a secular increase in its level of operations, it will also experience an increased need for permenent working investment. The question arises as to what kind of debt should be used to finance this permenent increase. On the one hand, this investment is always necessary to support sales. Therefore, unlike seasonal bulges in working investment, it is not self-liquidating. On the other hand, the nature of permanent working investment is quite unlike fixed assets; like water flowing through a section of pipe, the working investment is constantly being refreshed. And yet it is always there. It is more liquid than fixed assets, but just as permenent to a going concern. While funds are always slowing through working investment, the absolute amount, or net working investment, remains relatively constant. The solution to the dilemma lies in the ultimate source of repayment. Like fixed assets, since the net working investment is not converted to cash in the normal course of operations, repayment of debt must come form cash flow. Therefore long term debt

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is the proper debt.instrument.

IV. Hybrid Use

In some cases the distinction between types of use is ill defined, and certain hybrid debt instruments have developed. For example, if the permanent portion of working investment consists primarily of receivables, a revolving credit may be called for.* In the normal course of operations a revolving credit is permanent and repayment comes from cash flow. But the revolving credit can also be self-liquidating if operations cease. As the receivables are collected, the proceeds can be used to repay the loan. As a result, revolving credits have the characteristics of both long and short term debt by asset usage and source of repayment.

Conclusions

The question of long term or short term debt is primarily resolved by the nature of cash needs through the method of repayment available for the debt. The amounts to be lent depend upon the risks of conversion and the risks of cash flow from operations.

* A revolving credit is a legal commitment to lend up to a maximum stipulated amount for a period in excess of one year. Unlike long term loans, revolving credits do not generally contain fixed amortisation schedules. The borrower can take down the funds as he needs them and repay the debt whenever he likes without prejudicing his ability to reborrow the funds within the time limitation of the revolving credit agreement.



