

C H A P T E R - VDEBT CAPITAL MANAGEMENT

Funds required to meet the operating requirements vary with the particular circumstances involved. "The nature of operating requirement may be different, depending upon whether they arise from initial undertaking, a seasonal change, or a permanent form of expansion"⁽¹⁾. It becomes very much difficult for a firm to continue its trading or manufacturing activities with the fixed fund originally provided by its promoters through equity. No going concern can continue its activities under such tight and fixed fund condition. With the passage of time, the need for additional fund becomes a necessary condition and it increases by degrees due to increasing cost of input factors, as well as for increasing operational activities. Hence, alternative sources of fund must be recognised and assured of to meet minimum requirements. Should the fund be sought from the owners or the creditors?, i.e., whether the form of financing be equity or debt? If the former source is intended, then it is to be noted that equity cannot and should not be raised every now and then and hence the option to be exercised frequently is for debt only. The firms resort to borrowings not only to overcome existing shortage of fund but also for capacity improvement and improved level of current operations.

The preference for debt as a source of fund is ~~not~~ warranted by a number of reasons, both financial and non-financial, of which the most important are :

1. To increase earnings per share.
2. To decrease overall cost of financing.
3. To ensure non-interference in control and management of the firm.
4. To introduce flexibility in capital structure.

Each of these may be considered in detail.

1. The use of debt as a component of capital structure i.e. leverage, increases the earnings per share. Leverage increases the financial risk of the equity holders but the leverage effect reveals that, "the expected yield of a share of stock is equal to the appropriate capitalisation rate P_k for a pure equity stream in the class, plus a premium related to financial risk equal to the debt equity ratio times the spread between P_k and r ". (2)

(P_k = expected yield on a share;
 r = rate of interest on debt).

So "the companies whose capital structure includes some debt, the rate of return or yield i_j , is a linear function of leverage.

This is as follows:

$$i_j = P_k + (P_k - r) \frac{D_j}{S_j} \quad (3)$$

(D = Debt Capital, S = Equity Capital)

j = a company, k = homogeneous risk class)

or $i_j = P_k + (P_k - r) L$; (where $\frac{D_j}{S_j} = L$)

Now, in the case of unlevered firm:

$$\frac{D_j}{S_j} = L = 0$$

$$\therefore (P_k - r) L = 0$$

$$\text{Hence, } i = P_k$$

and 'i' increases with the $(P_k - r) L$ subject to degree of financial leverage, L , in the firm.

Therefore, financing through the element of debt as a component of capital structure helps to increase the expected earnings per share (assuming absence of tax).

Now, if the element of corporate income tax be introduced then, in the case of unlevered firm,

$$i_j^t = P_k^t \quad \dots\dots\dots (L = 0)$$

and, in the case of levered firm,

$$i_j^t = P_j^t + (P_k^t - r) L ;$$

Note :

("The after tax capitalization rate P_k^t can no longer be identified with 'average cost of capital' which is $P_k = \bar{X}_j / V_j$. The difference between P_k^t and the 'true cost' of capital is a matter of some relevance in connection with investment planning within the firm."⁽⁴⁾)

(\bar{X}_j = Total income generated by the firm; V_j = value of the firm j).

2. The financing through debt reduces the weighted average cost of capital and, therefore, stands as a cheaper source of finance.

The investible fund raised through debt financing must earn the same rate of return as are currently obtained in the unlevered firms but the gain on the interest cost because of its admissibility as a deductible expense, the real cost of debt financing becomes the tax adjusted interest costs. Therefore, the cost of debt financing can be shown as under:

$$r = I/D$$

Effective-cost of debt, $k_d = r (1 - t)$

(i.e. after-tax cost of debt = (before-tax cost) (1 - tax rate).

Where, I = Interest amount to be paid;

r = rate of interest;

D = Amount of Debt fund;

t = corporate income-tax rate.

A minimum required rate of return (i.e. minimum expected yield on shares) must be earned on the owner's equity to have and to keep the fund in the firm, which is the cost of equity (k_e) and can be ascertained as follows:

$$MPS = \frac{EPS}{K_e}$$

$$\text{or } K_e = \frac{EPS}{MPS}$$

when $MPS = \text{Book value per share}$, $K_e = EPS = i^t$

since,

$$i^t = P_j^t + (P_k^t - r) L ;$$

$$\text{or } i^t = P_j^t + P_j^t - r (1 - t) L ; (\text{since, } P_k^t = P_j^t + rt)$$

Now, in terms of cost the equation can be re-written as:

$$K_e = K_a + (K_a - K_d) L ;$$

Therefore $K_e > K_d$ [since, $K_a = K_e(w) + K_d(w)$].

(where K_e = cost of Equity ; K_d = effective cost of debt ;
 K_a = Overall cost of capital).

Therefore, the firms prefer debt fund to equity fund to reduce the weighted average cost of fund raised. The K_d stands constant and becomes sensitive to the change in the prevalent market rate of interest in the marginal rate of corporate income tax.

3. The lenders do not have voting rights nor they have the right to participate in the management. Only through the covenant rights they can protect their interests. Therefore, the use of debt neither involves the risk of loss of control nor dilutes the voting power. Thus, firms are inclined to raise fund through debts instead of equity. However, if large amount of debts are used, the restrictions imposed might curtail the freedom of the management; but that does not mean direct participation in the management itself.

4. Flexibility of capital structure ensures that a firm does not experience difficulty in changing its sources of finance i.e., the firm is in a position to substitute one form of financing for another, with the ultimate objective of economic use of funds. The use of debt capital can be aligned with the need for funds. Subject to varying conditions of the repayment of debt capital as well,

borrowings of new debt funds can be resorted to. But such a practice of adjustment of funds according to needs is not possible in the case of equity capital as it can not be paid back while the firm continues as a going concern. In case the firm is over-capitalised, the funds raised from equity sources cannot be paid back; but such action is possible, if the fund has been obtained through borrowings.

However, the restrictive covenants may curtail the flexibility if the firm is a delinquent one in respecting the conditions of indentures. But inclusion and acceptance of minimum restrictive clauses ensures smooth sailing that circumscribe the financial action in future, and the clause concerning retirement at discretion provides the scope to shift the agency for the same source whenever warranted by circumstances. The flexibility is subject to debt capacity, the greater the debt capacity and the greater scope of availability of debt capacity, the greater the degree of flexibility. The exercise of greater degree of flexibility involves higher cost i.e. the raising of debt fund at easy terms including the right to retire will involve higher interest costs and demand greater liquidity and, therefore, implies insolvency risks — both technical and legal. "An analysis of the magnitude and stability of cash flows relative to fixed charges is extremely important in determining the appropriate capital structure for the firm."⁽⁵⁾ Thus, management efficiency of finance function calls for being alert and taking of cautious steps to come over such situation. A comparison of benefits and costs involved in attaining

the desired degree of flexibility and balancing them properly will help considerably. "The flexibility of the corporation through the use of debt and common and preferred or classified common stock is practically unlimited. So far as legal arrangements are concerned, almost any division of the elements of risk, income and control can be drawn."⁽⁶⁾

The use of debt capital need be analysed from the view point of its use period — short term and long term.

Short-term debts.

The short-term financing embraces the borrowing or lending of funds for periods of a year or less in duration. These funds are used to finance temporary investments in current Assets, and current liabilities are customarily incurred in connection with regular current operations of the business.

While the use of short-term debt is, in a sense optional, all business firms make use of such funds. A dependence on long-term funds for variable portion of CA is not desirable. "By using short-term financing for temporary current assets and long-term financing for the permanent current and fixed assets, a reasonable compromise can be achieved between maximum safety (100 per cent long-term funds) and maximum flexibility (100 per cent short-term funds)!"⁽⁷⁾ As these short-run debts are mostly unsecured, they cannot disturb the capital structure of a firm and hence cannot exert influence upon the overall cost of capital.

The use of short-term debt is justified, rather a must, due to seasonal nature of the Tea industry, though the use of such fund is more risky as well as costlier. The short-term loans provide a substantial amount of fund during peak season irrespective of the size of the tea companies. The position of short-term loans can be observed from its linkage with other relevant and important variables as shown below:

TABLE - V.1

Short-term loan and other important variables.

Year	CLNA	CLNW	TLNW	INTNS
1974	0.6066	1.7091	3.1772	0.0503
1975	0.6540	1.7272	2.8414	0.0600
1976	0.6493	2.0206	3.2610	0.0497
1977	0.6564	2.0703	3.2612	0.0381
1978	0.7306	3.7749	5.5582	0.0526
1979	0.7615	5.2647	7.4490	0.0758
1980	0.8598	14.0332	18.5582	0.0864
1981	0.9723	(-)15.4545*	(-)20,2040*	0.0965

*NW is negative.

The claims of debt suppliers disclose their contribution in the asset formation of a firm in terms of book values. Though price level changes reduces the net claim to be received-back by the lenders their absolute claim cannot change as book value of debt remains constant, especially with respect to the principal amount.

The short-term sources of fund used by the Terai tea companies come to an alarming level; even upto the extent of 97.23 per cent of net tangible assets. In major part of the period under review it is above its mean value (0.7363). The abnormal increase of the CL is much prominent due to decrease in tangible assets caused by heavy amount of losses in the second-half of the study period. These losses have led NW even to the negative values (1981). The CL increased steadily by 3.1567 times (1974-81) with a mean value of Rs. 648.92 lakhs [Annexure-I (x)] compared to NA which also increased steadily by 1.9693 times, with a mean value of Rs. 851.95 lakhs. The variability in the short-term requirement of fund is well appreciated because of the seasonal nature of the Tea industry. The maximum dependence on short-term sources has, however, compelled the firms to become technically insolvent and on the mercy of short-term lenders. The cases of KAMALA, DEBIJHORA, CHANDMONI and KHARIBARI may be cited here by the way of illustration.

The CL/NW ratio adduces evidence to above effect. The acute paucity of permanent working capital [Annexure I (xxiii)] in conjunction with managerial efficiency achieving operational and net operational results cautioned the long-term lenders. The enlargement of equity base was, by and large, impracticable because

of the weak position disclosed by the capitalised value of the net operational results. Thus, there being no other way the firms had to resort to short-term borrowings even at the cost of much higher risks of insolvency. Of course, from the view point of the policy of sound financial management the prudence of the management is questionable; but, this source being the recourse to the last resort, the options available were either to liquidate the firm or to assume higher risk of liquidation itself. For mere survival the latter course, quite naturally, seemed preferable. This can be evidenced from the fact that the fall in NW has duly led to an increase in CL. For every rupee of NA, on an average, an amount of Re. 0.7363 was obtained from the short-term lenders, and for every one rupee of ~~Net~~worth, the same became Rs. 1.9033.

The CL/NA increased every year to the extent of .0467 per unit of NA whereas CL/NW decreased by 0.5684 per unit of NW.

The impact of external fund compared to that of internal ^{was} of a much higher degree. The steady increases in TL were of a higher degree than in NW during 1974-77. From 1978 onwards, however, NW registered a decline and finally depicted itself as a negative value. The density of external sources (TL/NW) came to an average of 2.9878, swinging in between 2.8414 and 20.2040. The rise of TL/NW finally disclosed a steady increase of 6.3591 times with a fall in one year only (1975). The sharp jumps (1980 and 1981) were more due to diminished denominators than due to increase in the values of numerators. The negative values of both the ratios (CL/NW and TL/NW) signify the inadequacy of fund to repay the lenders if the

existing assets were liquidated at ~~their book values~~.

The predominance of short-term borrowing becomes much more evident from a comparison between CLNW and FLNW. The latter never exceeded 1.4235 time of NW (Table-II.3) whereas the former exceeded by more than 15 times of the NW itself disclosing the precarious condition in the use of short-term fund.

Due to **sharp** increase in net sales, caused by the demand factor, the cost of loan (INT) in terms of net sales (NS) did not vary significantly from its mean value (0.0637) except during 1977.

The Terai tea industry employs funds largely from short-term sources. More than 89.47 per cent of the sample units arrange more than 50 per cent of their total liability from this source (Table V.2); more than 50 per cent units have taken recourse to short-term sources ranging between 72.31 per cent and 86.64 per cent of the total liabilities.

TABLE - V.2

Short-term Borrowings as % of TL

Short-term borrowing as % of TL	No. of Units.
44 - 50	2
50 - 60	3
60 - 70	4
70 - 80	5
80 - 87	5
Total	19

The maximum dependence upon short-term sources can also be observed from the FL/CL ratio which reveals that the long-term external sources never exceed 12.15 per cent of short-term funds (Table-V.3) and, simultaneously, the FL exceeded 0.0859 per unit of TL (Table-II.4) during the period under review.

TABLE - V.3

FL as percentage of CL

Year	1974	1975	1976	1977	1978	1979	1980	1981
$\frac{FL}{CL}(\%)$	12.13	6.22	4.12	3.84	9.44	12.15	9.71	9.21

Long-term debts:

In Tea, long-term liabilities are incurred to finance additional plant and equipment or improvement or extension of the cultivable land, long-term loans are also resorted to obtain additional working capital or to pay-off due long-term debt. The funds raised from long-term sources are usually retired by systematic repayment of principal and interest over a period ranging between 5 to 10 years. Despite the acute necessity of long-term funds Terai tea has not been able to raise funds either through enlargement of equity base or through interest bearing bonds. The former means as a source of fund seems to be forbidden as not even a single company had opted for the new issues within a period of last 30 years. (All increases in paid up capital represent capitalisation of existing reserves through bonus issues). Issue of debentures as a means of long-term source has also never been tried. The firms are less inclined to debenture issues possibly due to their vacillatory

history of performance. To assess the impact of long-term funds as well as its use in the Terai tea Cos., a few important financial ratios are detailed below:

TABLE V.4

Long-term Debts and the Financial Structure.

Year	Equity/FL	FL/NW	FA/EL	FL/CL	FL/TL
1974	2.6830	0.2171	5.7072	0.1213	0.0683
1975	4.4313	0.1075	9.9565	0.0622	0.0378
1976	5.9760	0.0833	14.8402	0.0412	0.0256
1977	5.4874	0.0796	15.4916	0.0384	0.0244
1978	1.8175	0.3563	5.5109	0.0944	0.0641
1979	1.1388	0.6396	4.1006	0.1215	0.0859
1980	1.8899	1.3623	4.1614	0.0971	0.0734
1981	1.2172 (-)	1.4235	4.5705	0.0921	0.0705

The EQUITY/FL ratio reveals an uneasy pattern of ups and downs and has largely been influenced by the FL itself. Only on two occasions, but in different accounting periods (1977 and 1978), equity base was enlarged through capitalisation of reserves [Annexure I (i)]. The growth of FL signifies less availability and utilization of FL itself as a component of the capital structure in the earlier periods (1974-77). The availability of such funds in later-half (1978-81) improved the fund position and, thereby, the ratio deflated proportionately — except that of 1979 [Annexure I (vi) and I (i)] when a few firms [KAMALA,

SYEDABAD, SUKNA, TIRRIHANA, NEW DARJEELING UNION, ASHAPUR, BHOJNARAYAN, DARJEELING - JALPAIGURI, KHARIBARI, DEBIJHORA] availed of long-term funds from commercial banks by providing formal collateral securities as well as the personal guarantee of individual Directors. Though of a small magnitude, some funds were also raised from private sources. The EQUITY/FL ratio widely fluctuated from its mean value 2.9926 with a co-efficient of variation 0.6308, indicative of the increasing volume of FL, mainly during the later-half (1978-81) period.

The FL and NW moved in diametrically opposite direction revealing a high negative correlation between them. As the amount of equity disclosed a, more or less, static condition, the NW, due to a minimum possible capital formation, during 1974-78, increased. On the other hand, the FL declined during the same period and thus was the decreasing value of this ratio. Increased FL, however, pulled up this ratio in the later periods (1979-81). The negativity of this parameter value during 1981, already explained earlier, is indicative of the inability of firms to meet total external liabilities if assets are liquidated at book values. The EQUITY/FL ratio values clearly corroborate the conditions of FL/NW which also fluctuate widely from its mean value (0.1778) to the extent of 4.0938 times (SD = 0.7278). The dominance of long-term debt is thus much more prominent in the second-half (1978-81) and in last two years (1980 and 1981). It surpassed the NW itself revealing the acute paucity of funds in companies that used borrowed funds.

The FAFL ratio corroborates the trend as well as the

distribution pattern of EQUITY/FL (both negatively skewed) signifying the decrement in the value of FL during first-half and increment in that of the later half of the period under review. The extent of non-utilization of FL in fixed zone and diversion of this long-term external fund to current zone becomes evident as the fall in the value of FL in earlier parts (1974-77) and subsequent increase in later parts (1978-81) duly disclosed by the FL/TL, have not been matched with the FA/FL. It leads us to infer that funds have not been used in fixed zone. The use of long-term fund if employed in fixed zone should have increased the productive function leading at least to minimum contribution towards NW, but in reality what is revealed through financial performance records is quite opposite. The NW and FL are highly negatively correlated; while FL declined the NW increased and the vice-versa. The FL was put into the current zone to mitigate the acute paucity of the net working capital. Had the FL been put to use in fixed zone, it could have minimised the risk of insolvency through the liquidation of FA to CA. However, the violation of the matching principle might justify the prudence of the management through the crudest form of logic but non-improvement of profitability despite additional doses of funds from long-term external sources has aggravated the insolvency risk - both technical and legal - and the Terai tea firms had to bear the burnt of it (Ref. Page 62)

The time function of the following ratio values also point towards the same observation.

EQUITY/FL	=	2.9926 - 0.5315 t;
FL/NW	=	0.1778 - 0.0389 t;
FA/FL	=	8.0421 - 0.9419 t;
FL/CL	=	0.0835 + 0.0032 t;
FL/TL	=	0.0562 + 0.0049 t;

Debt capital has added much risk to the equity holders and considering the trend values it can aptly be remarked that term lenders have the better claim over FA than the equity holders. The managerial prudence needs re-designing of its policies aiming at minimising the risk of insolvency and to balance the risk-return trade-offs of the long-term borrowings.

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References and notes.

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4. Ibid., p. 464.
5. Van Horne, James C., "financial management and policy", Prentice-Hall of India, Private Ltd., New Delhi, 1975, p. 256.
6. Howard Bion B., and Upton, Miller, op.cit., p. 56.
7. Ibid., p. 311.