

- **Capital Structure Decision** of the firm can be characterised as a choice of that combination of debt and equity, which maximises the market value of the firm.
- **Modigliani and Miller's Theory** According to *MM's proposition I*, the firm's market value is not affected by capital structure; that is, any combination of debt and equity is as good as any other. Firms borrow by offering investors various types of securities. In *M-M's* world of perfect capital market, because of same borrowing and lending rates for all investors and no taxes, investors can borrow at their own. Why should they pay a premium for a firm's borrowing? *M-M* accept that borrowing increases shareholders return, but, they argue, it also increases risk. They show that increased risk exactly offsets the increased return, thus leaving the position of shareholders unchanged. This is *M-M's proposition II*.
- **Interest tax shield and the value of the firm** One unrealistic assumption of *M-M's* hypothesis is that, they assume no existence of taxes. When *corporate taxes are assumed*, firms can increase earnings of all investors through borrowing which results in interest tax shield. The value of interest tax shield (PVINTS) is equal to TD:

$$PVINTS = \frac{T(K_d D)}{k_d} = TD$$

where T is the corporate tax rate, k_d is the cost of debt and D is the amount of debt. Thus the market value of the levered firm will be equal to the market value of unlevered firm (V_u) plus the present value of interest tax shield (TD);

$$V_1 = V_u + TD$$

This equation implies that a firm can continuously increase its value by borrowing more debt. Thus firms should have 100 percent debt in their capital structures.

- **Traditionalists** argue that market imperfections make borrowing by individual investors costly, risky and inconvenient. Thus the arbitrage envisaged by $M-M$ will not work, and investors may be willing to pay a premium for shares of levered firms. But thousands of the levered firms would have already satisfied the demand of investors who like their shares. Therefore, a firm changing its debt policy is unlikely to influence the market value of the firm.

- **Miller Theory incorporating both Corporate and Personal Income Taxes** In practice, we do not find all firms using high amounts of debt. One explanation for this behaviour could be personal income taxes. Miller has propounded a theory incorporating both corporate and personal income taxes. According to him, the advantage of interest tax shield is offset by the personal taxes paid by debt-holders on interest income. Interest income is tax-exempt at corporate level while dividend income is not. Interest income is taxed at personal level while dividend income may largely escape personal taxes. Thus companies can induce tax paying investors to buy debt securities if they are offered high rate of interest. But after a stage it will not be possible to attract investors in the high-tax brackets. This point establishes the optimum debt ratio for the individual firms.
- **Financial Distress** There is another factor which reduces the tax advantage of borrowing. It is financial distress, which is costly. It includes cost of inflexibility, inconvenience and insolvency. Thus the value of a levered firm is:

$$V_l = V_u + TD - \text{PV of financial distress}$$

The value will reach optimum value where marginal advantage of corporate borrowing, TD, equals marginal present value of costs of financial distress (PVFD).

- **Capital Structure Decision** The advantage of debt is that it saves taxes since interest is a deductible expense. On the other hand, its disadvantage is that it can cause financial distress. Therefore, the capital structure decision of the firm in practice should be governed by the trade-off between tax advantage and costs of financial distress. Financial distress becomes costly when the firm finds it difficult to pay interest and principal. From this point of view, both debt ratio and EBIT–EPS analysis have their limitations. They do not reflect the debt-servicing ability of the firm.
- **Debt Capacity** means the amount of debt which a firm should use given its cash flows. Cash flow analysis indicates how much debt a firm can service without any difficulty. A firm does not exhaust its debt capacity at once. It keeps reserve debt capacity to meet financial emergencies. The actual amount of debt also depends on flexibility, control and size of the firm in terms of its assets.

Other factors, which are important when capital is actually raised, include timing (marketability) and flotation costs.