IRRELEVANCE OF CAPITAL STRUCTURE

Introduction

The Modigliani and Miller approach to capital theory, devised in the 1950s, advocates the capital structure irrelevancy theory. This suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has a lower debt component has no bearing on its market value. Rather, the market value of a firm is solely dependent on the operating profits of the company.

The capital structure of a company is the way a company finances its assets. A company can finance its operations by either equity or different combinations of debt and equity. The capital structure of a company can have a majority of the debt component or a majority of equity, or an even mix of both debt and equity. Each approach has its own set of advantages and disadvantages. There are various capital structure theories that attempt to establish a relationship between the financial leverage of a company (the proportion of debt in the company's capital structure) with its market value. One such approach is the Modigliani and Miller Approach.

Irrelevance of Capital Structure

The irrelevance proposition theorem is a theory of corporate capital structure that posits financial leverage does not affect the value of a company, if income tax and distress costs are not present in the business environment. The irrelevance proposition theorem was developed by Merton Miller and Franco Modigliani, and was a premise to their Nobel Prize-winning work, "The Cost of Capital, Corporation Finance, and Theory of Investment."

Modigliani and Miller advocate capital structure irrelevancy theory, which suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has a lower debt component in the financing mix has no bearing on the value of a firm.

KEY Points

- The irrelevance proposition theorem states that financial leverage does not affect a company's value, if it does not have to encounter income tax and distress costs.

- The theorem is often criticized because it does not consider factors present in reality, such as income tax and distress costs. It also does not consider other variables, such as profits and assets, which influence a firm's valuation.

Capital structure irrelevance assumptions

The assumptions that are required for the capital structure to be irrelevant are the following:

1. No agency costs: no costs from increased leverage

2. Investment decisions are unaffected by financing decisions: revenues from operations are independent of how the operations are financed

3. Riskless borrowing and lending

4. Investors have the same expectations on the company's prospects

5. Capital markets are perfectly competitive: no transaction costs, taxes, or bankruptcy costs

Under these assumptions, the capital structure is irrelevant.

Capital structure irrelevance formula

There is also a second proposition that states that the cost of equity will increase linearly with the proposition of debt financing. That's because, as the proposition of debt goes up , the equity becomes riskier because debtholders have a priority claim. The larger proportion of cheaper debt offsets the increase in the cost of equity. Thus, the WAAC remains constant

The following formulae captures the relationship

$$r_e = r_0 + \frac{D}{E}(r_0 - r_d)$$

where re is the required rate of return on equity, r0 is the company's unlevered cost of equity, rd is the required rate of return on debt, and D/E is the debt-to-equity ratio.

Example of Irrelevance Proposition Theorem

Suppose company ABC is valued at $200,000. All of its valuation is derived from the assets of an equivalent amount that it holds. According to the irrelevance proposition theorem, the valuation of the company will remain the same regardless of its capital structure i.e., the net amount of cash or debt or equity that it holds in its account books. The role of interest rates and taxes, external factors that could significantly affect its operational expenses and valuation, in its account book is completely eliminated.

As an example, consider that the company holds $100,000 in debt and $100,000 in cash. The interest rates associated with debt servicing or cash holdings are considered to be zero, according to the irrelevance proposition theorem. Now suppose that the company makes an equity offering of $120,000 in shares and its remaining assets, worth $80,000, are held in debt. After some time, ABC decides to offer more shares, worth $30,000 in equity, and reduce its debt holdings to $50,000.

This move changes its capital structure and, in the real world, would become cause to reassess its valuation. But the irrelevance proposition theorem states that the overall valuation of ABC will still remain the same because we have eliminated the possibility of external factors affecting its capital structure.