Reading 27

CAPITAL STRUCTURE

1. **(C)**   **internal financing, because it is least likely to send a negative signal to investors.**
    Explanation
    Based on the pecking order theory, a firm's management will select the financing option that sends the least negative signals—and is, therefore, least visible to investors. Internal financing is most preferred, followed by debt financing, while equity financing is the least preferred choice.
    (Module 27.2, LOS 27.d)

2. **(C)**   **there is an optimal proportion of debt that will maximize the value of the firm.**
    Explanation
    The static trade-off theory seeks to balance the costs of financial distress with the tax shield benefits from using debt. Under the static trade-off theory, there is an optimal capital structure that has an optimal proportion of debt that will maximize the value of the firm.
    (Module 27.2, LOS 27.d)

3. **(C)**   **11.6%.**
    Explanation
    Weight of equity = $15 million / ($10 million + $15 million) = 60%
    Weight of debt = $10 million / ($10 million + $15 million) = 40%
    WACC = 0.60(k_{CE}) + 0.40(after-tax k_D)
    WACC = 0.60(0.15) + 0.40(0.10) (1 − 0.35) = 0.09 + 0.026 = 0.116 or 11.6%
    (Module 27.1, LOS 27.a)

4. **(B)**   **bonding costs, a component of the net agency costs of equity.**
    Explanation
    Bonding costs relate to implicit and explicit costs intended to make it less desirable for managers to leave the company. These include the implicit costs of noncompete agreements and insurance premiums to guarantee performance. Bonding costs, along with monitoring costs and residual losses, are components of the net agency cost of equity, which relates to the net costs of minimizing the inherent conflict of interest between managers and shareholders.
    Monitoring costs relate to costs incurred by shareholders to monitor and supervise management, including shareholder reporting expenses and board of directors compensation.
    Pecking order theory relates to managers' preference for selecting financing options, like internally generated financing, that would be viewed the least negatively by shareholders.
    (Module 27.2, LOS 27.d)

5. (A) **is not affected by its capital structure.**
    Explanation
    According to Modigliani and Miller's Proposition I, under certain assumptions, including the absence of taxes and bankruptcy costs, the value of a firm is unaffected by its capital structure.
    (Module 27.2, LOS 27.c)

6. (B) **difference between the value of a levered firm and unlevered firm is at its maximum.**
    Explanation
    The optimal capital structure of a firm occurs at a point where the value of a levered firm is at its peak. Because the value of an unlevered firm is constant (there is no tax benefit from debt and no cost of financial distress), the point where the value of a levered firm is at its peak is also the point where the difference between the value of a levered firm and the value of an unlevered firm is at its maximum.
    (Module 27.2, LOS 27.d)

7. (C) **firms should be financed with all debt.**
    Explanation
    Because MM with taxes does not consider costs of financial distress, it concludes that tax savings of debt financing are maximized at 100% debt.
    (Module 27.2, LOS 27.c)

8. (A) **cost of equity is upward sloping.**
    Explanation
    The cost of equity is upward sloping, because as leverage increases, the cost of equity increases. According to the static trade-off theory, WACC initially decreases with additional debt financing, but then rises when the increase in the expected value of financial distress outweighs the tax benefits of additional debt. The tax shield (benefit), however, will increase as borrowing increases.
    (Module 27.2, LOS 27.d)

9. (C) **10.2%.**
    Explanation
    The capital structure ratios are:
    *   Debt to total capital = $10 / ($10 + $30) = 25%
    *   Equity to total capital = $30 / ($10 + $30) = 75%
    The formula for the WACC (if no preferred stock) is:
    WACC = $w_d k_d (1 - t) + w_{ce} k_{ce}$
    where w_d is the percentage of operations financed by debt, w_{ce} is the percentage of operations financed by equity, t is the marginal tax rate, k_d is the before-tax cost of debt, and k_{ce} is the cost of common equity.
    WACC = 0.25(0.08) (0.60) + 0.75(0.12) = 0.102 = 10.2%.
    (Module 27.1, LOS 27.a)

10. **(B)** **Firm B, whose debt weight increased relative to target following the issuance of new debt.**

Explanation

The analyst should be most concerned with Firm B because by issuing new debt, the management has intentionally altered the capital structure weights. Unintentional or unavoidable deviations from a firm's target capital structure would be less cause for concern; these include deviations caused by fluctuations in the market value of equity as well as minimum lot size requirements when issuing new equity, which may make it difficult to adhere to precise capital structure weights.

(Module 27.2, LOS 27.d)

11. **(B)** **100% debt.**

Explanation

If MM's other assumptions are maintained, removing the no tax assumption means that the value of the firm is maximized when the value of the tax shield is maximized, which occurs with a capital structure of 100% debt.

(Module 27.2, LOS 27.c)

12. **(A)** **The value of the firm is maximized at the point where the WACC is minimized.**

Explanation

The tax shield provided by debt causes the WACC to decrease as leverage increases. The value of the firm is maximized at the point where the WACC is minimized, which is 100% debt under the MM assumptions.

(Module 27.2, LOS 27.c)