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BY EVERYONE'S SMART UNIVERSITY

Principles of Accounting

Lecture 8

MGM 227

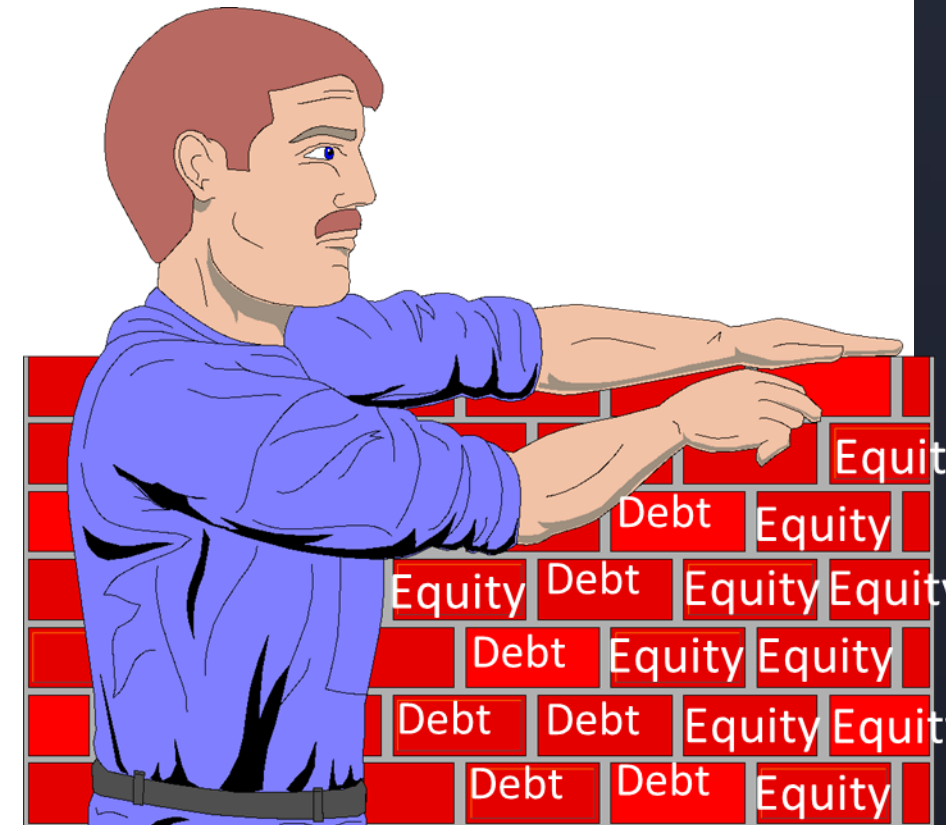
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Capital Structure and Dividend Policy Decisions

Capital Structure

The combination of debt and equity used to finance a firm.



Target capital structure

- The optimal mix of debt, preferred stock, and common equity with which the firm plans to finance its investments May change over time
- Trade-off between risk and return to achieve goal of maximizing the price of the stock

Corporate Equity Capital

Corporate equity capital is the financial capital supplied by the owners of a corporation.

Common stock represents ownership shares in a corporation. Ownership gives common stockholders certain rights and privileges that bondholders do not have. Common shareholders can vote to select the corporation's board of directors. The board of directors, in turn, exercises general control over the firm. In addition to voting for the board, common shareholders may vote on major issues facing the firm, such as mergers.

TABLE 10.3 Elements of Common Stock

- **Represents an ownership claim**
- **Board of directors (board) oversees the firm on behalf of the shareholders and enforces the corporate charter**
- **Voting rights for board members and other important issues allowed by the corporate charter**
- **Lowest claim on assets and cash flow**
- **Par value is meaningless, and many firms have low or no-par stock**
- **Dividends:** Received only if declared by the firm's board
Paid out from after-tax earnings and cash flow; not tax deductible
Dividends are taxable when received by the shareholder
Can vary over time
- **Maturity:** Never; stock remains in existence until firm goes bankrupt, merges with another firm, or is acquired by another firm

The common shareholders have a claim on all business profits that remain after the holders of all other classes of debt and equity securities have received their returns. But the firm may wish to retain some of those profits to reinvest in the firm to finance modernization, expansion, and growth. When so declared by the board of directors, owners of a firm's common stock receive dividend payments. The dividend is typically a cash payment that allows shareholders to receive some income from their investment. To many investors, an attractive characteristic of common stock dividends is their potential to increase over time. As a firm achieves success, its profits should grow and the shareholders can expect to see the dollar amount of their dividends rise. Of course, success and growth are not guaranteed. A firm may experience poor earnings or losses, in which case shareholders bear the risk of smaller dividends or the elimination of dividend payments until the firm's financial situation improves.

Preferred stock is an equity security that has a preference, or senior claim, to the firm's earnings and assets over common stock. Preferred shareholders must receive their fixed dividend before common shareholders can receive a dividend. In liquidation, the claims of the preferred shareholders are to be satisfied before common shareholders receive any proceeds. In contrast with common stock, preferred stock generally carries a stated fixed dividend. The dividend is specified as a percentage of par value or as a fixed number of dollars per year.

- **Factors Influence Capital Structure Decisions**

- 1. Firm's business risk
- 2. Firm's tax position
- 3. Financial flexibility
- 4. Managerial attitude

- **Business Risk:**
- The risk associated with projections of a firm's future return on assets (ROA) or return on equity (ROE) if the firm uses no debt.
- Depends on several factors
 - 1. Sales variability - volume and price
 - 2. Input price variability
 - 3. Ability to adjust output prices
 - 4. The extent to which costs are fixed (operating leverage)

- Financial Risk:
- The portion of stockholder's risk, over and above basic business risk, resulting from the manner in which the firm is financed
- Financial risk results from using financial leverage
- The extent to which fixed-income securities (debt and preferred stock) are used in a firm's capital structure

- **Determining the Optimal Capital Structure**
- Maximize the price of the firm's stock
- Changes in use of debt will cause changes in earnings per share, and thus, in the stock price
- Cost of debt varies with capital structure
- Financial leverage increases risk

- **The Effect of Capital Structure on Stock Prices and the Cost of Capital**
- EPS indifference analysis
 - at lower sales, EPS is higher with stock financing
 - at higher sales, EPS favours debt financing
- Maximizing EPS is not the same as maximizing stock price
- Stock risk (Beta) increases with debt

Liquidity and Capital Structure

- Difficulties with analysis
- 1. Impossible to determine exactly how either P/E ratios or equity capitalization rates (k_s values) are affected by different degrees of financial leverage.
- 2. Managers may be more or less conservative than the average stockholder, so management may set a different target capital structure than the one that would maximize the stock price
- Difficulties with analysis
- 3. Managers of large firms have a responsibility to provide continuous service and must refrain from using leverage to the point where the firm's long-run viability is endangered.

- Financial strength indicators
 - Times-interest-earned (TIE) ratio
 - a ratio that measures the firm's ability to meet its annual interest obligations
 - calculated by dividing earnings before interest and taxes (EBIT) by interest charges

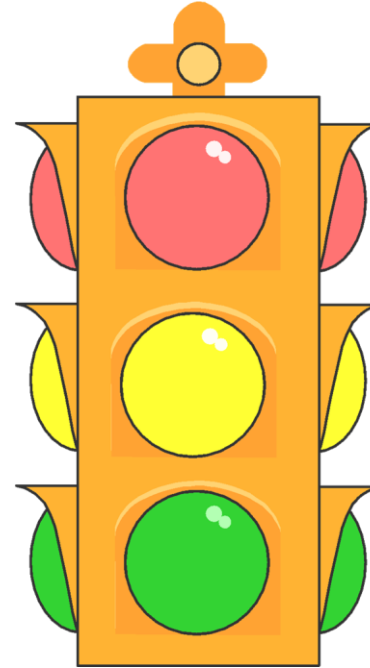
• Capital Structure Theory

- 1. Tax benefit/bankruptcy cost trade-off theory
- 2. Signaling theory

- **Trade-Off Theory**
- 1. Interest is tax-deductible expense, therefore less expensive than common or preferred stock
- 2. Interest rates rise as debt/assets ratio increases; tax rates fall at high debt levels; probability of bankruptcy increases as debt/assets ratio increases
- 3. Debt level below which the effects in point (2) are immaterial, but beyond this point the higher interest rates reduce the tax benefits and even further the bankruptcy costs lower the value of the stock.
- 4. Theory and empirical evidence support these ideas, but the points cannot be identified precisely
- 5. Many large, successful firms use much less debt than the theory suggests leading to the development of signaling theory

- **Signaling Theory**

- Symmetric information



- investors and managers have identical information about the firm's prospects

- **Signaling theory:**
- Asymmetric information
- managers have better information about their firm's prospects than do outside investors
- Signal
 - an action taken by a firm's management that provides clues to investors about how management views the firm's prospects

- Reserve borrowing capacity
 - the ability to borrow money at a reasonable cost when good investment opportunities arise
 - firms often use less debt than “optimal” to ensure that they can obtain debt capital later if it is needed

- **Variations in Capital Structures among Firms**
- Wide variations in use of financial leverage among industries and firms within an industry

TIE ratio measures how safe the debt is

- percentage of debt
- interest rate on debt
- company's profitability

- **Dividends**
- payments made to stockholders from the firm's earnings, whether those earnings were generated in the current period or in previous periods.
- Dividends affect capital structure
 - retaining earnings increases common equity relative to debt
 - financing with retained earnings is cheaper than issuing new common equity

- Dividend Policy and Stock Value
- Dividend irrelevance theory
 - theory that a firm's dividend policy has no effect on either its value or its cost of capital
 - investors value dividends and capital gains equally
- Optimal dividend policy
 - the dividend policy that strikes a balance between current dividends and future growth and maximizes the firm's stock price
- Dividend relevance theory
 - the value of a firm is affected by its dividend policy
 - the optimal dividend policy is the one that maximizes the firm's value

- Information content (Signaling)
 - Signaling hypothesis says that investors regard dividend changes as signals of management's earnings forecasts

- **Types of dividend payments**
 - **Residual dividend policy**
 - a policy in which the dividend paid is set equal to the earnings minus the amount of retained earnings necessary to finance the firm's optimal capital budget.
 - **Stable, predictable dividend policy**
 - payment of a specific dollar dividend each year, or periodically increase the dividend at a constant rate
- the annual dividend is fairly predictable by investors

- Constant payout ratio
 - percentage of earnings, such as 50%
 - must watch out for reductions not to signal permanent decline in earnings

Dividends and Stock Repurchases

Dividends, as we've learned, are not a legal obligation of the firm and may be skipped, decreased, increased, stopped, and started according to the collective wisdom of the corporation's board of directors. When they are paid, they are typically paid on a quarterly basis, four times over the course of a year.

Many firms offer shareholders the choice to receive a check for the amount of their dividends or to reinvest the dividends in the firm's stock

. Dividend reinvestment plans (DRIPs) allow shareholders to purchase additional shares automatically with all or part of the investor's dividends. Fractional shares can be purchased and DRIP purchases have no or low commissions. Suppose an investor owns sufficient shares to receive \$10 in dividends on a stock from its quarterly declared dividend. If the stock price is \$25, the DRIP program allows the investor to purchase $\$10/\25 , or a 0.40 share of the firm's stock. If the stock price is \$8, the investor's reinvested dividends will purchase $\$10/\8 or 1.25 shares of the stock. Whether the dividends are received as cash or reinvested, the investor must pay taxes on them.

Most firms that issue dividends try to maintain a consistent **dividend payout ratio**, which is dividends per share divided by earnings per share (EPS). The dividend payout ratio for example, Microsoft company's dividend is \$1.44 per share divided by earnings per share, \$1.48:

Dividend payout ratio = $\$1.44 / \$1.48 = 0.97$ or 97 percent

This is quite high. If this were the case, Microsoft likely expects its earnings to rise in the coming year. Rare is the firm that wants to continually return all of its earnings to shareholders as dividends; typically, funds are retained to finance growth and expansion.

A key component of the “how much?” decision is what level of dividends is sustainable over time? A firm does not want to announce it will begin paying dividends and then have to reduce or eliminate the dividend at a later time due to the need to conserve cash. Dividends are thought to send a signal to investors about management’s view of the future cash-generating ability of the firm. Managers and the board of directors have private information about the strategies, competitive responses, and opportunities facing the firm that are not known to the investing public. Thus, if the firm increases dividends, that is a positive signal or indicator to the financial markets that management believes the future looks stable, or improving, for the firm. A reduction in dividends is taken to be a pessimistic indicator of the firm’s future, so firms set dividend levels so future reductions are unlikely given their current perspective on the firm’s future.

- **Factors Influencing Dividend Policy**
- 1. Constraints on dividend payments
 - debt contract restrictions
 - cannot exceed “retained earnings”
 - cash availability
 - IRS restrictions on improperly accumulated retained earnings

- 2. Investment opportunities
 - large capital budgeting projects affect dividend-payout ratios
- 3. Alternative sources of capital
 - flotation costs
 - increasing capital costs
 - ownership dilution

- **Capital Structures and Dividend Policies Around the World**
- Companies in Italy and Japan use more debt than companies in the United States or Canada, but companies in the United Kingdom use the least amount.
- Different accounting practices make comparisons difficult
- Gap has narrowed in recent years
- Dividend-payout ratios vary greatly also

- Logical analysis would indicate that:
- 1. Tax codes generally favor use of debt in developed countries
- 2. In countries where capital gains are not taxed, investors should show a preference for stocks compared with countries that have capital gains taxes
- 3. Investor preferences should lead to relatively low equity capital costs in those countries that do not tax capital gains
- Reality does not match these conclusions

- What about risk, especially bankruptcy costs?
- Foreign banks are closely linked to corporations that borrow from them, and have substantial influence over the management of the debtor firms
- Equity monitoring costs are comparatively low in the United States
- These indicate that U.S. firms should have more equity and less debt than firms in countries such as Japan and Germany