Chapter 10: Equity Securities

Introduction

1. In addition to borrowing funds, companies may raise external capital to finance their operations by issuing (selling) equity securities.

Features of Equity Securities

1. Common forms of equity securities that companies issue include common stock (or common shares), preferred stock (or preferred shares), convertible bonds, and warrants. Each type of equity security has different features which affect the security's expected return, risk, and value. There are four features that characterize and vary among equity securities:
2. Life:
    a. Many equity securities are issued with an infinite life, meaning that they do not have maturity dates. However, there are some that do.
3. Par Value:
    a. Equity securities can, but do not necessarily, have a par value. Par Value refers to the share's stated value, or face value. In some jurisdictions, issuing companies are required to assign a par value when issuing shares.
4. Voting Rights:
    a. Some equity securities give holders the right to vote on certain matters. Shareholders do not typically involve themselves in the day-to-day operations of a business, but they collectively vote to elect a Board of Directors. The job of the Board of Directors is to monitor the company's business activities on behalf of its shareholders and to appoint senior management. For some matters of high importance, voter approval of the shareholder base may be required.
5. Cash Flow Rights:
    a. Cash flow rights are the rights of the shareholders to distributions, such as dividends, made by the company. In the event of a company being liquidated, assets are distributed according to a priority of claims (seniority rankings.)

Types of Equity Securities

1. Common Stock
    a. Common stock (or common shares, ordinary shares, or voting shares) are the most common type of equity security issued by companies. A common share:
        i. Represents ownership in a company
        ii. Has an infinite life (no maturity date)
        iii. May or may not be issued with a par value (and, in the situation it is, it is typically assigned a low value that has potentially no connection to its selling or market price)
        iv. Typically comes with voting rights and cash flow rights proportionate to the size of their ownership stake. Some companies issue two classes of stock (Typically

referred to as Class A and Class B stock, in order to differentiate voting rights among stock types and maintain control. But, they still want to attract investors and will provide dividends to Class B shares.)

b. Common stock represents the largest proportion of equity securities by market value. Common stock can exist for both private and public companies. Common stock of public companies typically trade on stock exchanges, which is conducive to shareholders being able to trade at fair prices.

2. Preferred Stock
    a. Preferred stock are the other main types of stock that companies issue as equity securities. Characteristics of preferred stock include:
        i. Being paid dividends prior to common stock.
        ii. Having a higher claim on the company's assets than common stock.
        iii. Generally not being entitled to voting rights.
        iv. Typically being assigned a par value. In addition to the stated dividend rate, par value defines the annual dividend amount provided to preferred stock. This par value also represents the amount the shareholder would be entitled to receive in the event of liquidation.
        v. Sometimes providing the issuing company with the right to buy back the preferred stock at a pre-specified price (referred to as the redemption price.) Generally, the redemption price is equal to the par value.
        vi. Typically having a fixed dividend, although not necessarily. The dividend does not increase if the company's performance increases, and boards of directors are typically reluctant to reduce preferred dividendes.
        vii. Have different features regarding missed dividendes based on whether they are classified as:
            1. Cumulative: which require that the company pay in full any missed dividends before paying dividends to the common shareholders
            2. Non-Cumulative: which do not require that the company pay in full any missed dividends before paying dividends to the common shareholders.
        viii. Upon liquidation, potentially having the right to receive dividends prior to common shareholders.
    b. Sometimes companies will issue preferred stocks multiple times, and these are referred to by series. Each series will typically carry its own dividend based on stated par value and dividend rate, and may differ with respect to other features as well.
    c. Some preferred shares have provisions that give the shareholder the right to convert the preferred stock into common stock. This can be an advantageous option for the shareholder if the company is doing well and they want to partake in the success.
    d. Preferred stocks can also include redemption provisions, which give the issuing company the right to either buy back the stock or convert the stock into common stock, both at predetermined prices and after a predetermined period of time.

3. Convertible Bonds
    a. Convertible Bonds: are bonds issued by a company that give the bondholder the right to convert the bond into a prespecified number of shares. Although a convertible bond is technically a debt security, its market price is affected by the market price of the company's shares. Therefore, they are known as hybrid securities. Features:
        i. Conversion Ratio: The number of common shares that a bond can be converted to is known as the conversion ratio, which can either remain constant or change over the life of the bond. If converted, the bonds are retired and common shares are converted.
        ii. Conversion Value: is equal to the conversion rate times the market price of the share.
    b. Because the conversion option is a benefit to the bondholders, convertible bonds typically feature lower interest rates than comparable bonds without conversion provisions. When convertible bonds are issued, the conversion ratio is set so that its value as a straight bond is higher than the convertible bonds conversion value.
    c. If the share price of a company increases, the conversion value of a convertible bond increases. It is possible that the conversion value may increase above the value of its comparable straight bond.
    d. If the conversion value of a bond is low relative to the straight bond value, the bond will trade at close to its straight bond value. However, if the conversion value is high relative to the straight bond value, it will trade for closer to its conversion value.
    e. Investors may choose not to convert a bond even when its conversional value is greater than its par value.
    f. Additionally, convertible bonds can include redemption provisions that allow the issuing company to either buy back the bonds or convert them into common shares at a predetermined price and after a predetermined period of time.

4. Warrants
    a. Warrants are a form of equity-like security that entitles the holder to buy a pre-specified amount of common stock at a pre-specified price (referred to as the exercise price or stock price.) Warrants come with an expiration date, after which the holder loses the option. Expiration dates are typically set several years into the future.
    b. Holders of warrants will choose to exercise their right only when the exercise price is equal to or lower than the price of a common share. Otherwise, it would be cheaper to buy stock in a market.
    c. In some cases, companies may attach warrants to a bond or preferred stock to make the securities more attractive. In this situation, warrants are referred to as sweeteners, because the inclusion of them allows the issuer to offer a lower interest rate on the bond or lower fixed annual dividend on the preferred stock.
    d. Companies may also issue warrants to employees as a form of compensation and in order to align employee and company incentives/goals. In this circumstance, warrants are referred to as stock options.

5. Depository Receipts
    a. Depository receipts are securities that represent an economic interest in a foreign company, and they trade like common shares on domestic stock exchanges.
    b. The transaction costs associated with purchasing depository receipts are much lower than those of directly purchasing stock on a foreign company on a foreign exchange.
    c. Depository receipts are not issued directly by foreign companies, rather, they are issued by financial institutions.
    d. Depository receipts typically do not offer the holders voting rights in the company, instead those are held by the custodian financial institution.

Risk and Return of Equity and Debt Securities

1. Debt securities and equity securities each have different risk and return profiles. Debt equities and preferred stock both have return potential limited by their respective cash flows, which do not increase if the company is doing well.
2. The return potential for common stocks is much higher, as their value increases with improved company performance. However, they have much more risk, as their value fluctuates with the stock price. In some sense, the power of voting right allows holders to mitigate some of that risk.
3. Debt securities are the last risk because the cash flows are contractually obligated. Preferred stock is less risky than common stock because it ranks higher than common stock with respect to dividends. The risk of preferred stock is also somewhat reduced by the promise of annual dividend payments. In this regard, common stock is considered to be the most risky, as neither dividends nor asset security upon liquidation are guaranteed.
4. Seniority Ranking:
    a. Determines how assets are distributed following a priority of claims. The typical structure is as follows:
        i. Secured Debt
        ii. Unsecured Debt
            1. Senior Unsecured Debt
            2. Senior Subordinated Debt
            3. Junior Subordinated Debt
            4. Equity Securities
                a. Preferred Stock
                b. Common Shares
5. Debt capital is borrowed money and therefore represents a contractual obligation of the company. Debt investors have higher claims on company assets than equity investors. Upon liquidation, debt investors are the first to be paid (with their own respective order), followed by preferred stock and common shares (known as the residual claimants in a company.)
    a. The assets that equity investors have are proportionate to their size of share.
    b. Equity investors are protected by limited liability, which means that claimants of the company do not have the ability to take assets that privately belong to the shareholder. Therefore, equity investors can not lose more than they have invested in a company.
        i. Limited liability of shareholders can actually cause the losses sustained by debt investors to increase in the event of liquidation, as they have no incentive to use

    capital to increase the value of assets that are being liquidated and paid to debtors.

6. Given the riskier nature of equity securities, shareholders expect to earn higher returns than debt securities over the long term. In quantitative terms, the returns and standard deviation of equity securities are greater than that of debt securities.

Valuation of Common Shares

1. Discounted Cash Flow Valuation
    a. This method values a security as the present value of all future cash flows that are expected to be received from the security. This valuation approach applied to common shares relies on an analysis of the characteristics of the company issuing the share (such as the company's ability to generate earnings, the expected growth rate of earnings, and the level of risk associated with the company's business environment.)
    b. Common shares are expected to produce two types of cash flow: dividends and the proceeds from selling the share.
    c. The DCF Valuation methods can also be used to value preferred shares. Valuing preferred shares is typically easier than for common shares because the expected dividends do not change. The future value of a preferred share is the discounted value of all future dividends, equal to the dividend divided by the discount rate.

2. Relative Valuation
    a. This method estimates the value of a stock as the multiple of some measure, such as EPS or Revenue per share. The multiple is determined based on price and the relevant measure for publicly traded, comparable equity securities. The key assumption to this approach is that equity securities of companies with similar risk and return characteristics should have similar values. Relative valuation relies on the use of price multiples of comparable publicly traded companies/an industry average.
    b. Price-to-Earnings Ratio:
        i. Is a common multiple that people use in the relative valuation method. For example, a share of a company that has a P/E ratio of 1, but is trading for $12, has a multiple of 12.
    c. One issue with the relative valuation method is that changes in price multiples change with investor sentiment, due to the fact that investor sentiment influences stock prices.

3. Asset-Based Valuation
    a. The asset-based valuation method estimates the value of a common stock by calculating the difference between the value of a company's total assets and its outstanding liabilities. In other words, it estimates the value of common equity by calculating the company's net asset value. This difference is equal to the shareholders' equity.
    b. Notable elements:
        i. One assumption is that the company is liquidated, sells all its assets, and then pays off its liabilities.

    ii. The values of some assets reported on the balance sheet may have values that are practically different, as a result of reporting them at historical cost. In order to account for this, current market values can be estimated.
    iii. Some assets may not be reported on the balance sheet due to financial reporting rules. For instance, intellectual property and brand loyalty.

4. Implicit Assumptions of Valuation Approaches
    a. The DCF method relies solely on estimates of a company's cash flows and implicitly assumes that the company will continue to operate forever.
    b. The asset-based valuation method assumes that the company will stop operating, providing a liquidation value.
    c. The relative approach does not estimate cash flows, but instead uses price multiples of other, comparable publicly traded companies to estimate the value of an equity. This method implicitly assumes that common shares of companies with similar risk and return characteristics should have similar price multiples.

Company Actions That Affect Equity Outstanding

1. Initial Public Offering (IPO)
    a. The difference between private and publicly traded companies is that equity (shares) of a private company are available only to select investors and are not traded on public markets, whereas equity (shares) of a publicly traded company are available to the public and are traded on stock markets.
    b. The event during which a company first makes equity (shares) publicly available is called an Initial Public Offering. IPOs have the following advantages:
        i. It gives a company more visibility, which makes it easier to raise capital.
        ii. It helps attract talented staff, improves brand awareness, and increases credibility with trading partners.
        iii. It provides greater liquidity for shareholders who want to sell their shares or buy additional shares.
        iv. Shares become easier to buy and sell.
    c. A disadvantage of becoming public is the increased regulatory and disclosure requirements. IPOs are expensive, and can also cost as much as 10% of the proceeds.

2. Seasoned Equity Offering
    a. After an IPO, a publicly traded company may choose to sell additional shares to raise more capital. Doing so is referred to as a seasoned or secondary equity offering. Compared to an IPO, this has lower transaction costs.
    b. A typical seasoned equity offering increases the number of shares outstanding by 5 - 30%. For an existing investor who does not buy additional shares during the seasoned equity offering, the increase in shares dilutes the investor's ownership percentage.

3. Share Repurchases
    a. Companies may choose to return cash to shareholders by repurchasing shares rather than paying dividends. Assuming that the company's net income is not affected by doing so, this will increase the company's earnings per share.
    b. Repurchased shares are either cancelled or kept and reported as treasury stock in the shareholders' equity account on the company's balance sheet. Treasury stocks are not included in the company's number of shares outstanding.
    c. To buy back shares, companies can either buy shares on the open market or make a formal offer for repurchase directly to shareholders.
    d. For an investor, a share repurchase by a company will increase their ownership percentage, as the number of shares outstanding decreases.

4. Stock Splits and Stock Dividends
    a. A stock split is when a company replaces one existing common share with a specified number of common shares.
    b. A stock dividend is when a company distributes additional shares to its common shareholders.
    c. Stock splits and dividends both increase the number of shares outstanding, but they do not change any single shareholder's proportion of ownership. The issuance of new stock is done proportional to the shareholder's current proportion of ownership. Both of these actions increase the number of shares outstanding and decrease the stock price.
    d. Advantages of stock splits and dividends:
        i. As companies grow and do well, their stock prices increase. At a certain point, they may become expensive enough that it reduces liquidity and favorability among investors. A stock split or dividend will lower the price, increase liquidity, and make the stock a more favorable investment opportunity.
    e. Companies with very low stock prices may conduct a reverse stock split to increase their stock price. This will reduce the number of shares outstanding and increase their stock's price. One risk that this action addresses is the risk of having their share price drop to a point where they get delisted from public trading markets. Similar to a regular stock split, the proportion of ownership of the company's equity investors do not change.

5. Exercise of Warrants
    a. Companies that issue warrants as a form of compensation may have to increase the number of shares outstanding if the warrants are exercised. If an investor executes the warrant, the number of shares outstanding increases, and all of the other shareholders will see their ownership percentage decrease. Given the number of employees that have warrants, the number of shares outstanding typically increases from employee warrants every year. To offset this, companies try to maintain some level of share buybacks.

6. Acquisitions
    a. Acquisitions can be accomplished by one company agreeing to buy all of another company's shares outstanding. All of the acquired shares are redeemed for cash, for stock in the acquiring company, or for a combination of the two.
    b. Shareholders of both the acquiring and target company are asked to vote on a proposed acquisition.
    c. If the acquiring company has cash and the target company is sufficiently small, there may be no need to issue additional shares.
    d. For larger acquisitions, the acquiring company may pay for the purchase by issuing new shares. The amount of new shares issued depends on the purchase price of the target company and the ratio of the two company's stock prices. This will increase the number of shares outstanding for the acquiring company and dilute the shareholders' ownership of the company.

7. Spinoffs
    a. Spinoffs are companies that are created by the separation of an existing subsidiary from an already existing company. Spinoffs are new economic entities, and the shares of the spinoff are distributed to the shareholders of the parent company. This results in a decrease in the share price of the parent company, as some of its assets are now gone.
    b. A company's management may conduct a spinoff in an effort to create value for its shareholders. There is potential for the market to greater value two specialized companies than a single company combining the two.