

# The role of efficient market hypothesis



Corporate finance provides the skills which Spry Plc needs to identify and select as corporate strategies that add value to the firm such as investments. Throughout this paper, capital market and efficient market hypothesis has been discussed critically to evaluate Spry Plc's market position; then possible finance sources has been discussed to obtain finances, and lastly cost of capital and its consequence on large companies has been assessed (Lo, Mamaysky and Wang, 2000); (Lakonishok, Schleifer and Vishny, 1994).

Capital markets are the place where Spry Plc can meet investor who has finance to offers for long term. This finance may be equity finance involving the issue of new ordinary share or debt finance from a wide range of loans and debts securities. Capitals market is also a place where investors buy and sells company and government securities (Grossman, Sanford and Stiglitz, 1980); (Campbell, 1987); (Lakonishok, and Smidt, 1988).

Capital markets are divided by two parts: primary market and secondary market. primary market help the companies to issues new securities to the new or existing shareholders by marking a public issue or right issues. This can help company perform better to influence shareholders that the company is willing to be stronger over the time both financially and operationally (Lo, Mamaysky and Wang, 2000); (Shiller, 1981); (Keim, and Stambaugh, 1986).

Secondary market is the market in which previously issued securities are traded. An active secondary market after the Initial Public Offering (IPO) provides the pre-IPO shareholders with a chance to convert some of their

wealth into cash makes it easier for the Spry Plc to raise additional capital later and makes it easier for the company to use their stock to acquire other companies. This is to ensure Spry Plc stock will trade in an active secondary market before they incur the high costs of an IPO (Fama, Eugene and French, 1988); (Campbell and Shiller, 1988).

## **The Role and Importance of Capital Market**

The primary role and importance of the capital market is to raise long term funds for corporation while providing a platform for the trading of securities. This is to protect increment of the market share and price of securities to protect their investments in future (Lo, Mamaysky and Wang, 2000) (DeBondt, Werner and Thaler, 1995).

## **Efficient Market Hypothesis (EMH)**

Efficient Market Hypothesis (EMH) asserts that financial markets are efficient or that prices on traded assets such as share and fixed interest securities are already reflect all known information. It can state that the companies may expect that they can develop more efficient market, more random the cycle of price changes generated by such a market and the most efficient market of all is one in which price changes are completely random and changeable (Fama, Eugene and French, 1988); (Lakonishok, Schleifer and Vishny, 1994); (Keim, and Stambaugh, 1986).

## **The role and importance of Efficient Market Hypothesis**

Efficient Market Hypothesis (EMH) information is defined as anything which may affect the share price that is not known in present and appears randomly in the future. The role of EMH is how Spry Plc managers consist of

analyzing and investing appropriately based on an investors tax consideration and risk profiles (Ariel, 1990); (Poterba, and Summers, 1988) (Cooper, Dimitrov and Rau, 2001); (Roll, and Shiller, 1992).

EMH will not consistently outperform the market by using any information that the market already know except through luck. The share prices may not determine to future stock performance example the market may not know about an events which will lead to lower profits. This can not be controlled by anyone when the share prices will be changing depending on the markets (Grossman, Sanford and Stiglitz, 1980); (DeBondt, Werner and Thaler, 1995); (Fluck, Burton and Quandt, 1997).

### **Weak form of Efficient Market Hypothesis**

In this stage all past market prices and data are fully reflected in the price of securities and stock. It is based on information about event shaping the Spry Plc may not fully replicate in price. This state that future price movements are determined entirely by information not contained in the price series (Fama, Eugene and French, 1988); (Lakonishok, and Smidt, 1988).

### **Semi-strong form of EMH**

This form emphasize that all publicly available information is fully reflected in securities prices. This implies that neither fundamental analysis nor technical analysis techniques will be able to reliably produce excess return (Campbell, 1987) (DeBondt, Werner and Thaler, 1995).

## **Strong form of EMH**

This states that all information is fully reflected in securities price. A market needs to exist where an investor can not consistently earn excess return over a long period of time (Cooper, Dimitrov and Rau, 2001).

## **Sources in Finance**

Corporate finance is an area of finance dealing with financial decisions and the tools and analysis used to make those decisions. Organizations must ensure that the company is making good financial decisions and all decisions made are profitable for the organization (Poterba, and Summers, 1988); (Keim, and Stambaugh, 1986).

Sources of finance are divided into external finance and internal finance. One example of internal finance is retained earnings which are known as company profit. Another internal source is often overlooked is the saving generated by more efficient management of working capital. This states that the company has sufficient cash savings in accounts to pay off all the debts owed as bank overdraft, trade creditors, and other debts (Campbell and Shiller, 1988); (Lakonishok, Schleifer and Vishny, 1994).

External finance is available which can be split broadly into debt and equity finance. External finance comes from outside to invest and will pay-off based on terms agreed with interest (Ariel, 1990).

## **Equity Finance**

Share capital is issued by a company and converted into small units become shares of the companies. Shareholder is the person who is holding the company share. There are two types of shares normally issued by a company:

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ordinary share and preference share capital (Cooper, Dimitrov and Rau, 2001); (Keim, and Stambaugh, 1986).

## **Ordinary Shares Capital**

Ordinary share is important source of raising long term capital by Spry Plc. It represents the ownership of a company. Ordinary share capital will not get the fixed dividend but shareholder will get the basic interests from the company. Ordinary shareholders have the power to vote for the rights and they have the right to choose managing directors (Shiller, 1981); (Fluck, Burton and Quandt, 1997); (Rasches, 2001).

The important merits of raising funds through issuing ordinary share are as follows (Samuelson, 1965); (Odean, 1999):

There will not be a mandatory burden for the company to pay dividend to equity shareholders yearly.

Ordinary shareholders have the right and power to vote who will be in the management committee of the company.

Ordinary share issue can be time consuming and it is considered risky.

Company has less control over the management as it is decided by shareholders (Ariel, 1990); (Roll, and Shiller, 1992).

## **Preference Shares Capital**

Preference shareholders enjoy a superior position over equity shareholders in two ways. Preference shareholder will receive a fixed rate of dividend out of net profits of the company before any dividend is declared for ordinary

shareholders. Preference shareholders do not have any vote rights (Fama, Eugene and French, 1988) (DeBondt, Werner and Thaler, 1995).

The merits of preference share as follows (Basu, 1983):

Preference share is a safety share to invest and company will provide a reasonably steady income in the form of fixed rate of return.

Shareholder does not have the right and power to vote for management.

Preference share often is not able to raise enough fund desired by the company (Ball, 1978).

## **Retained Earning**

A company generally does not distribute all its earnings amongst the shareholders as dividends. This is the profits which show in the financial statement how much the organization gains for a year and can be retained in business for future use (Grossman, Sanford and Stiglitz, 1980) (Cooper, Dimitrov and Rau, 2001).

The merits of retained earning as a source of finance is as follows (Samuelson, 1965); (Odean, 1999):

As the funds are generated internally, there are greater choices and flexibility available.

It may lead to increase in the market price of the equity shares of a company

Retained earning will not held the organization to use the capital wisely.

Misuse is often occurred in this policy (Campbell, 1987); (Roll, and Shiller, 1992).

## **Debt Finance**

### **Bank loan**

Bank provides funds for different purpose as well as for different time periods. For example, if Spry Plc borrows money from the bank with good understanding there can be different type of repayment like extended period, overdraft, term loans etc. though the borrower is required to provide some security assets of the firm before a loan is authorized by a commercial bank (Campbell and Shiller, 1988); (DeBondt, Werner and Thaler, 1995); (Keim, and Stambaugh, 1986).

The merits of raising funds from a commercial bank are as follows (Keim, 1983):

Banks provide funds when companies are in need and timely.

Loan amount can be increased according to business needs and can be repaid in advance when funds are not needed.

Bank often requires mortgage of assets in order to approve loan. Sometimes it takes too many formalities which take time (Ariel, 1990); (Cooper, Dimitrov and Rau, 2001); (Nicholson, 1960).

### **Debentures**

Debentures are an important tool for raising long term debt capital. A company can raise funds through issue of debentures which bear a fixed rate

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of interest. The debenture issued by a company is an acknowledgment that the company has borrowed a certain amount of money from public, which promises to repay at a future date with interest (Lo, Mamaysky and Wang, 2000); (Lakonishok, Schleifer and Vishny, 1994).

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The merits of raising funds through debentures are given as follows (French, 1980):

The issue of debentures is suitable in the situation when the sales and earnings are relatively stable.

As debentures do not carry voting rights, financing through debentures does not affect organizational control of equity shareholders on management.

Issuing debentures is risky when company business market is not good and incurs losses because debenture amount must be paid regardless of company gains profit or losing business (Fama, Eugene and French, 1988); (Cooper, Dimitrov and Rau, 2001).

## **Cost of Capital**

When investors provide a corporation with funding they expect the company to generate an appropriate return on those funds. From the company's perception, investors' expected return is a cost of using the funds and it is called as cost of capital. A variety of factors influence a company's cost of capital. The cost of capital is also a key factor in choosing the mixture of debts and equity used to finance the company and is a critical element in

business decision (Cooper, Dimitrov and Rau, 2001); (Keim, and Stambaugh, 1986).

## **Weighted Average Cost of Capital (WACC)**

The cost of capital used to analyze capital budgeting decision is a weighted average of the component's cost. Therefore, Spry Plc managers should strive to make the company more valuable and that value of a company is determined by the size, timing and risk of free cash flow (FCF). A company's value is the present value of its FCFs, discount at the WACC (Shiller, 1981). The formula of Weighted Average Cost of Capital as follows:

$$\text{Value} = \frac{\text{FCF}_1}{(1+WACC)} + \frac{\text{FCF}_2}{(1+WACC)^2}$$

## **Cost of Equity**

Companies can raise common equity in two ways there are (Fama, 1970):

Directly by issuing share.

Indirectly by retained earnings.

Mature company issue new share of common stock. In fact if there are less than 2 percent of all new corporate funds come from the external equity market because of high floatation cost, investors' perceived issuing equity as a negative signal with respect to the true value of the company's stock. An increase in the supply of stock will put weight on the stock price, forcing the company to sell the new stock at a lower price than existing, before the new

issue was announced (Campbell and Shiller, 1988) (Lakonishok, Schleifer and Vishny, 1994); (Nicholson, 1960).

Rate of return ( $r_s$ ) is investors' expectation to earn that return by simply buying the stock of the company. Therefore,  $r_s$  are the cost of common equity raise internally by reinvesting earning (Poterba, and Summers, 1988); (Cooper, Dimitrov and Rau, 2001).

Whereas debts and proffered stock are contractual obligations that have easily determined cost, is more difficult to estimate  $r_s$ . There are few methods to compute such as Capital Asset Pricing Model (CAPM), Discount Cash Flow (DCF) and others. CAPM approach is to estimate the risk free rate, estimate the current expect market risk premium, estimate the stock's beta coefficient and substitute the preceding values into the CAMP equation to estimate required rate return on the stock (Ariel, 1990); (DeBondt, Werner and Thaler, 1995); (Jensen, 1968).

$$K_s = K_{rf} + \beta (K_m - K_{rf})$$

## Cost of Debt

Cost of Debts determines the rate of return debts holders required to pay. Companies use both fixed and floating rate debt straight and convertible debts and debt with sinking and without sinking funds and each form has a somewhat different cost. Therefore, Spry Plc should know at the start of the planning period, the exact types and amounts of debt that will be used during the period. The types used will depend on the specific assets to be financed and on capital market condition as they develop over time. The relevant cost is the marginal cost of new debt to be raised during planning

period. The after tax cost of capital is used to calculate the WACC (Lo, Mamaysky and Wang, 2000); (Nicholson, 1960).

After tax component cost of debt = Interest rate – Tax Saving

$$= r_d - r_d T$$

$$= r_d (1-T)$$

## **Market value of equity and debt**

The formulation of market value of equity and debts as below:

Market value of common equity

(Market value common equity + market value of debt + Market value of preference equity)

In this stage, market value use to compute how much company share values at the market. The market value for equity is let publicly traded company is simply the price per share multiplied by the number of share outstanding. It can state market value of equity is similar to trade in ordinary share in market. The market value of debts similar to the company traded bonds. Most companies have a large banks loan. Therefore, this is one of the debts company holds. Preferred stock holders are fixed to gain the dividend by the company and percentages term is based on net profit for the years. The cost of common equity is usually determined using the Capital Asset Pricing Model (Grossman, Sanford and Stiglitz, 1980); (Fluck, Burton and Quandt, 1997).

The formula to compute it is

$$\text{WACC} = \text{Weight of Preferred Equity} * \text{Cost of Preferred Equity} + \text{Weight of Common Equity} * \text{Cost of Common Equity} + \text{Weight of Debt} * \text{Cost of Debt} * (1 - \text{Tax rate})$$

## **Importance of cost of capital**

Considered as the opportunity cost, cost of capital is the minimum return required by an investor. On the other hand, for shareholders cost of capital is the dividend rate they expect to gain along with the gain on values of shares. Besides, for loan holders, cost of capital is the rate of interest for the loan provided. So company must perform well to maintain all returns effectively; otherwise this finance providers will sell or transfer their funds to others with better rate or return (Fama, Eugene and French, 1988); (Keim, and Stambaugh, 1986).

## **Capital Structures**

A company can obtain a long term financing in the form of equity, debts or some combination. The firm's mixture of debt and equity is called as capital structure. The capital structure decision includes a company's choice of target capital structure, average maturity of its debts and specific source of financing it chooses at any particular time (Ariel, 1990); (Cooper, Dimitrov and Rau, 2001); (Jensen, 1968).

## **Traditional Approach**

Traditional approach defined as an optimal capital structure. This is to compute how much the firm's total value leverage for the year. When the investor is to invest their money in the company with a higher risk they may get higher interest and income. But when shareholder perceived higher risk

and cost of equity is raised to the point at the level, the cost of debt will be more expensive than equity. So the company needs to pay more interest and will burst to them when operate (Campbell, 1987); (Lakonishok, Schleifer and Vishny, 1994).

### **Miller and Modigliani (I)**

Miller and Modigliani (I) [MM] first analyze that leverage is the value of any firm is established by capitalizing its expected net operating income (EBIT) at a constant rate that is based on the company's risk. The first proposition establishes that under certain conditions, a firm's debt-equity ratio does not affect its market value. This developed a trade off theory of capital structure. It shows that debt is useful because interest is tax deductible but also that debts bring with it costs associated with actual or potential bankruptcy. The optimal capital structure strikes a balance between the tax benefits of debts and the cost associated with bankruptcy (Lo, Mamaysky and Wang, 2000); (DeBondt, Werner and Thaler, 1995).

### **Miller and Modigliani (II)**

The second proposition establishes that a firm's leverage has no effect on its weighted average cost of capital provided the cost of equity capital is a linear function of the debt-equity ratio. This stage is showing that under some conditions, the optimal capital structure can be complete debt finance due to the preferential treatment of debt relative to equity in a tax code. MM (II) is to determine that the expected return of portfolio equal with WACC of expected return of the securities in the portfolio. This proves that Proposition II is more flexible compute compare with MM (I) for the company because signaling models use financial decisions to reveal information to make

decision (Grossman, Sanford and Stiglitz, 1980); (Poterba, and Summers, 1988); (Keim, and Stambaugh, 1986).

## **Implications of cost of capital on capital structure**

Using cost of capital on capital structures bring the implications that the firm must earn a minimum rate of return to cover the cost of generating funds for investments if the firm wish public to buy bonds and stocks (Campbell and Shiller, 1988); (Lakonishok, Schleifer and Vishny, 1994).

## **Conclusion**

Achieving the goal of corporate finance required that any corporate investment is financed appropriately. Investment in a new market may have risk which is very often unknown. Therefore, management must identify and aware of the risk and plans accordingly with financing mix and impact the valuation to reduce capital structure that results in maximum value (Fama, Eugene and French, 1988); (Fluck, Burton and Quandt, 1997).