Finance Assignment

Name of Student

Name of Institution

The case company chosen is Boral (BLD)

*Historical returns for index*

*Rate of return for the index*

= (Ending price – starting price)/Starting Price \*100

For Nov 18

(58149.2-59483)/59483.09\*100 = -2.24%

For Dec 18

(57887.91-58149.2)/58149.2\*100 = -0.45%

For Jan 19

(60199.5-57887.91)/57887.91\*100 = 3.99%

For Feb 19

(63843.82-60199.5)/60199.5\*100 = 6.05%

For Mar 19

(64292.24-63843.82)/63843.82\*100 = 0.744%

The mean return is calculated as the simple average of the returns that are earned over the period specified. All the returns will be added and the sum is divided on the number of time periods. We can write the formula as:

**= ∑R/n**

Above, we have given the formula for the average returns for the case company, reference Company and the market index. In the following table the calculations will be shown regarding the above formula

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Company** | | | **Reference Company** | | | **Market index** | | |
| **Values** | **Sum** | **Mean** | **Values** | **Sum** | **Mean** | **Values** | **Sum** | **Mean** |
| -9.09% | -16.61% | -3.328% | 14% | 24% | 4.8% | -2.24% | 8.094% | 1.62% |
| -3.14% | 8% | -0.45% |
| 0.20% | 1% | 3.99% |
| 0.61% | -2% | 6.05% |
| -5.22% | 3% | 0.744% |

In the above table, we see that the case company has a negative return average over the period of time that is considered. The best performance is given by the reference company that shows the highest average return in the period specified.

*Standard Deviation of Returns*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Case** | | | **Reference** | | | **Market Index** | | |
| Returns | Mean | (R-mean)^2 | Returns | Mean | (R- mean)^2 | Returns | Mean | (R-Mean)^2 |
| -9.09% | -3.328% | 0.0033201 | 14% | 4.80% | 0.008464 | -2.24% | 1.61% | 0.0014823 |
| -3.14% | -3.328% | 3.534E-06 | 8% | 4.80% | 0.001024 | -0.45% | 1.61% | 0.0004244 |
| 0.20% | -3.328% | 0.0012447 | 1% | 4.80% | 0.001444 | 3.99% | 1.61% | 0.0005664 |
| 0.61% | -3.328% | 0.0015508 | -2% | 4.80% | 0.004624 | 6.05% | 1.61% | 0.0019714 |
| -5.22% | -3.328% | 0.000358 | 3% | 4.80% | 0.000324 | 0.74% | 1.61% | 7.5E-05 |
|  |  | 0.006477 |  |  | 0.01588 |  |  | 0.0045194 |
|  |  | 0.0016193 |  |  | 0.00397 |  |  | 0.0011299 |
|  |  | **0.04024** |  |  | **0.0630079** |  |  | **0.0336133** |

The above table shows the calculations for the standard deviations of return for the case company, Reference Company and the market index. The standard deviation is a measure of volatility and in turn it shows the risk associated with the returns of the company. This shows the historical volatility of shown in the returns of the company. In the above table the highest standard deviation is shown in the returns of the reference company which means that these returns are the most volatile of the three considered. As for the case company, the volatility is the lowest.

Equally weighted Portfolio

= 0.5 (-3.328%)+ 0.5 (4.8%)

=-0.01664+0.024

=0.00736

= 0.736%

This shows that if a person invests half of the amount in case company and half of the amount in the reference company, the person will get 0.736% in terms of the annual returns.

*Part B*

Risk free rate = 1.71%

Risk Premium = 6.5%

Boral Beta = 0.96

Ref Company beta = -0.3

For Boral company

Rf + Beta (Rm - Rf)

= 1.72% + 0.96 (6.5%)

= 1.72% +0.0624

= 0.0796

= 7.96%

For Reference Company

1.72% - 0.3(6.5%)

= 0.0172-0.0195

= - 0.0023

The above analysis shows that the required rates of return will differ in case of the case company and the reference company. The reference company is a bit unique in a sense that the beta is negative. This shows that the reference company moves in the opposite direction as the market. The required rate of return for the case company is 7.96% which shows that the investor will invest in the company only if the resultant rate of return is higher than this rate.

*Portfolio Returns*

0.5 (7.96%) + 0.5(-0.0023)

= 0.0398- 0.00115

= 0.04095

= 4.095%

*Percentage limitation*

The risk and return trade off leads the investors to the diversification aspect. The principle is that the investors should make the decision in such a way that the overall risk in the portfolio is minimized and returns are maximized. For this purpose, the investor will have to invest parts of the investment in the less risky options while some other parts will be invested in more risky options. The optimal combination would be the one that will minimize the risks and maximize the returns. The major criteria that is used to analyze the risk return tradeoff is the calculation of the Sharpe ratio. The major concept of the diversification lies in the improvement of the Sharpe Ratio as a result of addition of a certain asset to the portfolio (Eckert, 2014). More precisely the investors have to improve the risk adjusted returns of the portfolio by the addition of assets. The scenario is not very easy as discussed here. There are a larger number of aspects that have to be considered regarding the decisions in the portfolio management. The investor is not certain about the overall scenario related to the risk and return aspects of the various assets.

*Expected Returns*

The risk parity approach does not consider the expected returns while deciding the portfolio to be made. The maximum diversification approach also does not take into account the expected returns analysis. The supporters of both these theories say that these theories help to optimize the returns and the risk. However these theories take into account only the risk aspect. Any addition that has to do well in the portfolio scenario should consider both the risk and the return. These considerations have a clear upper hand for the valuation against those which only consider the risk aspect in decision making (Cheung, 2014).

c) The negative beta of the reference company shows that it will show a movement that will be opposite to the direction of the market. The average return for the reference company comes out to be the highest among all the companies considered. The usage of CAPM has shown the required rates of return for the case as well as the reference companies. The beta is the risk associated with the risk and volatility of the particular asset. The higher value of beta signifies the higher level of risk associated to that security. The model is practically not up to the mark because it has certain simplifying assumptions that are not realistic. These assumptions however, make the calculations much easier. The diversification of the risks associated with the securities is the major aim of the model. The diversification is much random in nature than described by this model. The investors do not diversify in such planned manner as put down by this model. The model states that the risk free rate of return is that which is related to the zero beta securities. This is not true because the zero beta securities have a return that is higher than the risk free rate of return. This aspect shows that the model is not accurate enough to help the investors practically.

*Task 2*

The term dividend policy refers to the practical steps taken by the management in making the dividend payout decisions. This may also refer to the decision regarding the amount of money that is to be distributed among the shareholders as well as the frequency of such distribution in terms of the time. The managers have realized the importance of a continuous stream of dividends. The investors in the shares also preferred the regular stream of cash dividends. The theorists have shown some contradicting views regarding the dividend payments. The common belief for the investors before the Miller and Modigliani paper was that more dividends increase the value of the firms paying dividends. The major research in this regard in the M&M paper that shows that there are certain assumptions which when applied, the market becomes perfect and the dividends are no longer relevant in a perfect market. In this market the company is more concerned with the earning of profits rather than dividing the income to the shareholders.

There are three main theories that have been presented in relation to dividends. Some say that increasing the dividends will increase the value of the firm. The second view shows that the increase in the dividends may have an opposite effect on the value of the firm. The last theory states that there is no impact of dividend payment on the value of the firm. This is known as the dividend irrelevance aspect. The returns for the company are negative so we can conclude that it is following the dividend irrelevance model.

The irrelevance model suggests that both the dividends and the capital structure are matters of irrelevance when the perfect capital markets are assumed. If this is accepted, we cannot make any model of capital structure and dividend valuation. The assumptions of this model have been the benchmarks against which the policies of the company will be evaluated. The irrelevancy propositions are inconsistent with a large number of researches done by many people. The managers should assume the position that allows them to have the most optimal choice (Dybvig, 1991).

*Task 2*

|  |  |
| --- | --- |
|  | One pack |

Memo

To: CEO

From:

CC:

Date: May 11, 2019

Re: Capital budgeting Decision

This document is intended to assess a project with respect to capital structure. The capital budgeting is the process of assessing the various options available to a business in terms of financing a certain project. The one pack company is faced with criticism from the various parts of the society because they were using the virgin plastic. Now the company needs to switch to the recycling plant option for the company. The various cost and the related inflows have been given and the assessment has to be done regarding the feasibility of the project. The technique that will be used for capital budgeting is the internal rate of return, this is the rate of return that results in an equal present value of inflows and out flows related to a project. The decision criteria for the internal rate of return states that if the rate is lower than the weighted average cost of capital, the project will be denied and if the internal rate of return is higher than the weighted average cost of capital, the project will be accepted. The start of the analysis is the assessment of the costs related to the option. The costs may have to be paid upfront or it may have to be borne all throughout the life of a certain project. This project shows an upfront cost of $ 30 million. Another part of the costs that have to be paid at the start of the project is $ 4.5 million that comprises of 1% of the expected sales revenue of the company for the first year. There is some interest cost of $ 1.2 million that has to be paid over the life of the project. The project machinery could be sold for $ 1.5 million which is considered as an inflow. The inflows from the sales is expected to be $ 451 million. There is an additional expense of $ 4 million for the administrative and general expenses related to the project.

*Calculations*

The project will last for 6 years and the calculations will be done keeping in view this same period of time. The inflows for the project will be $ 451 million of sales that are expected. The other inflow will be after 6 years when machinery will be sold in scrap. The costs have been mentioned before. When we compare the inflows and out flows and find out the internal rate of return, it turns out to be 9.6%, this when compared to the weighted average cost of capital, the company should take on the project.

The use of WACC as a base has many problems. The figure is affected by a large number of factors, some of which are in control of the company while some of them are not under control of the firm. The company cannot control the interest rates that are prevailing in the economy, the general level of the prices of the stocks and the tax rates. If there is a rise in the interest rates, the cost of debt for the company will increase and the firm has to pay the bond holders more as compared to the past. The general level of stock prices will affect the prices of the equity for the company as well. If there is a decrease in the prices of equity, the cost of equity will rise because there will be less people who are willing to purchase the shares of the company. The last factor namely tax rate has a direct impact on the cost of debt and then on the cost of capital (Houston, n.d.).

Other than the above factors, the company can control some of the factors affecting the capital structure. The capital structure itself affects the cost of capital and generally it is theoretically assumed that the company has a certain targeted capital structure and any change in that structure will affect the cost of capital of the company. All these aspects show that the weighted average cost of capital should be used as a criteria with care.

# References

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