**Finance Assignment**

**Name of Student**

**Name of Institution**

**Answer 1**

The CAPM shows the relationship between the systematic risk and the expected returns of a security. The components of the equation are the risk-free rate, market rate and beta. The investor is interested in the rate of expected return that is higher than the risk-free rate of return. The reason for this is that the risk-free rate does not have any risk in it. Thus, the investor will have an expected return higher than the risk-free rate of return. The difference between the risk-free return and the market return is called the risk premium.

**Answer 2**

The efficient market hypothesis states that the decision made by the investors are based on availability of the complete information. The efficiency can have allocative, operational and information aspects. The inefficient markets do not allow the investors to respond to the information in a timely manner. The financial markets may react too much to some of the events and then gradually calm down towards normality. There is no best time to purchase an asset in the efficient market where the information is complete and on time.

**Answer 3**

The dividend discount model is the method to predict the value of the stock based on the fact that the present value of the stock is the accumulated present value of all the dividend payments made over the life of the stock. The model does not consider the market conditions that prevail in the market. The dividend payout factors are the most important in this regard. If the value obtained by the dividend discount model is more than the market price, the stock is undervalued and should be bought.

**Answer 4**

The capital budgeting is the method to decide on the various projects available to the company. Net present value is one of the methods to evaluate the projects available. The method calculates the difference between the present values of the cash inflows and the present value of cash outflows. A positive net present value shows that present value of the inflows is more than the present value of outflows.

**Answer to numerical question 2**

1. Proportion of debt: 10/30 = 1/3

Proportion of equity: 15/30= 1/2

Proportion of Preferred stock: 5/30=1/6

1. The after tax cost is calculated for the debt only, this will be:

0.06(1-0.30)

=0.42

1. WACC = E/V \* Re+D/V\*Rd(1-t)

=15/30\*0.35/2.34+0.02+10/30\*.06

= 0.1695+0.014

= 0.1835 or 18.35%

The investment should be taken on because the rate of return that the company will be offering is higher than the required rate of return, i.e. 10%.

**Numerical 3**

|  |  |  |
| --- | --- | --- |
| **FV** | **PVF** | **FV/PVF** |
| 19000000 | 1.18 | 16101695 |
| 19000000 | 1.3924 | 13645504 |
| 19000000 | 1.643032 | 11563987 |
| 19000000 | 1.938778 | 9799989 |
| 19000000 | 2.287758 | 8305075 |
| 19000000 | 2.699554 | 7038199 |
| 19000000 | 3.185474 | 5964576 |
| 19000000 | 3.758859 | 5054725 |
| 19000000 | 4.435454 | 4283665 |
|  |  | 81757415 |

The above table shows the calculations for the net present value of the first project. The calculations show that the present value of the inflows accumulate to 81million. This means that the net present value will be positive in this case.

|  |  |  |
| --- | --- | --- |
| **FV** | **PVF** | **FV/PVF** |
| 12000000 | 1.18 | 10169492 |
| 12000000 | 1.3924 | 8618213 |
| 12000000 | 1.643032 | 7303570 |
| 12000000 | 1.938778 | 6189467 |
| 12000000 | 2.287758 | 5245311 |
| 12000000 | 2.699554 | 4445178 |
| 12000000 | 3.185474 | 3767100 |
| 12000000 | 3.758859 | 3192458 |
| 12000000 | 4.435454 | 2705473 |
|  |  | 51636262 |

The above table shows that the present value of the inflows is less than the initial cash flow required. This will result in the negative net present value for this project.

In the light of above discussions, the company should go for the first project if we consider the net present value concepts.

**Numerical Answer 1**

The expected return for the CAPM will be calculated as follows:

=3%+1.1(8%-3%)

= 8.5%

The company is offering a rate that is less than the rate expected by the investor so the investor should not invest in the company.

# References

Berkovitch, E., 2004. Why the NPV criterion does not maximize NPV?. *The Review of Financial Studies,* 17(1), pp. 239-255.

jory, S. r., 2016. Net Present Value and the Wealth Creation Process: A case Illustration. *The accounting educator's journal,* Volume 26, pp. 85-99.