Characterizing Risk and Return

Your name

Affiliation

**Q1**. The term **Risk** in business management is defined as the number of possibilities through which a company can suffer from some loses, they can occur due to economic changes, change in government policies, change in the needs of the customer or increased competition etc. Whenever a company starts or launches a new product they measure the risks of that product, keeping in mind the situations of the market (Sadgrove, 2016). There are five major principles or methods used for the risk assessment of the product:

1. **Alpha measure**, a risk that is calculated or compared by the value of benchmark index. The company set the value of the index according to their performance and market value, than they compare the performance value of the new product with the set index. If the output value is higher than the index, it is called positive alpha and other wise negative alpha.
2. **Beta measure,** compares the systemic risk (determines the possibilities of the new product that it will increase the instability of the company or collapse it altogether) value of the new product from company’s benchmark index. If the,

* Beta value =1, volatility of the product will be in conjunction with the benchmark.
* Beta value <1, volatility of the product will be below the benchmark.
* Beta value >1, volatility of the product will be higher than the benchmark.

1. **R-squared,** is used to measure that how much the values of new data are closer to the regression line, it is also called the coefficient of determination. R-squared is always measured in between zero and hundred percent.

* **Higher percentage** shows that this model perfectly fits on the data.
* **Lower percentage** shows that the values of data are not centered at the mean point and model does not fit the data.

1. **Standard Deviation,** this method is used to calculate the dispersion of data on mean values. This shows that how much the invested amount is deviating on normal, average and expected values.
2. **Sharpe ratio,** this method helps the investors in analyzing the profits of the new product, subtracting its risks. It is a comparison between the return rate of investment and the risks value of a new product (Schulte & Hallstedt, 2018).

**Q2.** **Firm specific risk** are those uncertainties which arise as a result of different events and have great impact on the performance of the firm or organization. The major **sources** of Firm specific risks are competition with the market, bad decisions made by mangers, macroeconomic factors or any kind of change in the exchange rates. **Market Risks** are those factors which have to be faced by every organization. A firm has no control on the Market risks, sources of Market Risks include sudden increase or decrease in the economy, inflation rate or change in interest rate. Unexpected changes in the market directly hit the stability of the firm (Enkel, Perez‐Freije, & Gassmann, 2005).

**Q3**. **Coefficient of Variation** is a statistical method which helps in the calculation of dispersion of the values of data around the mean points. The formula used to calculate coefficient of variation is:

CV=Standard deviation **/** expected value

Coefficient of variation is the ratio of standard deviation. It is useful in calculating or measuring the amount of variation in specific data set. For example there are two samples, each sample has used different set of methods for the evaluation of their output. Suppose sample A shows twenty five percent CV and sample B shows sixty five percent of CV, then we will conclude that sample B showed more variation in reference to its mean value (Abdi, 2010).

**Problems:**

1. Two years ago, Conglomco stock ended at $73.02 per share. Last year, the stock paid a $0.34 per share dividend. Conglomco stock ended last year at $77.24. If you owned 200 shares of Conglomco stock, what were your dollar return and percent return last year?

The dollar and percentage return for the last year will be:

Total investment = $73.02 \* 200 = $14,604

Capital gain = ($77.24 - $73.02) \* 200 = $844

Dividend received = $0.34 \* 200 = $68

**Total dollars return** =Capital gain + Dividend received

= $844 + $68 = $912

**Total percentage return** = total dollar return **/** total investment

= $912 / $14,604 = 6.24%

2. Coefficient of Variation

* CV = Standard deviation **/** Average return = 2.18
* = 24% **/** 11% = 2.18
* CV = 37% **/** 16% = 2.31
* CV = 29% **/** 10% = 2.90

The ranks according to values are:

Megaorg- Highest Risk

Supercorp- Medium Risk

Conglomco- Lowest Risk

3. Year-to-date, Conglomco has earned a −1.64 percent return, Supercorp has earned a 5.69 percent return, and Megaorg has earned a 0.23 percent return. If your portfolio is made up of 40 percent Conglomco stock, 30 percent Supercorp stock, and 30 percent Megaorg stock, what is your portfolio return?

Changing the weight values into points:

Weight of Supercorp = 0.30

Weight if Megaorg = 0.30

Weight of Conglomco = 0.40

Return of Supercorp = 5.69%

Return of Megaorg = 0.23%

Return of Conglomco = -1.64%

Portfolio return = 0.40 \* (-1.64%) + 0.30 \* 5.69% + 0.30 \* 0.23% = 1.12%

References

Abdi, H. (2010). Coefficient of variation. *Encyclopedia of Research Design*, *1*, 169–171.

Enkel, E., Perez‐Freije, J., & Gassmann, O. (2005). Minimizing market risks through customer integration in new product development: learning from bad practice. *Creativity and Innovation Management*, *14*(4), 425–437.

Sadgrove, K. (2016). *The complete guide to business risk management*. Routledge.

Schulte, J., & Hallstedt, S. (2018). Company Risk Management in Light of the Sustainability Transition. *Sustainability*, *10*(11), 4137.