

Performance Calculation & Presentation

The Global Investment Performance Standards introduced by the Chartered Financial Analysts (CFA) Institute are the current and rigorous industry standards with which Bayshore Bank & Trust complies when calculating portfolio return. Below outlines the principles that are used when calculating returns under these standards.

Account Return

Account performance is calculated using a Daily Valuation Methodology (DVM). To only consider investment gains or losses, this method eliminates **all the contributions & withdrawals** impact within the account as of each of the days such an activity was transacted (as opposed to averages used in older calculation methods). Contributions and withdrawals include all external cash flows and securities (capital additions or withdrawals) that are initiated by the client. This means that all performance return calculations are based strictly on the performance of your investments. The sub-period returns are calculated each time there is an external cash flow or securities transfer and are then linked to produce a periodic return. This return is shown under the "Account Performance" heading of the performance summary statement.

The CFA Institute also requires that sub-period returns be geometrically linked. The difference between an average return and geometric return is the compounding effect that is incorporated in the geometric calculation. For example, suppose that a portfolio had performances of 7%, 3% and -4% in the last three months. An average would calculate the final return as follows:

$$(0.07 + 0.03 - 0.04) / 3 = 0.02 \text{ or } 2\%.$$

Geometrically the calculation would be as follows:

$$[(1 + 0.07) * (1 + 0.03) * (1 - 0.04)] - 1 = 0.058 \text{ or } 5.8\%.$$

In other words, if you had \$100 at the beginning of the first period, you would have \$107 at the end of the first period, \$110.21 ($107 * 1.03$) at the end of the second and \$105.80 ($110.21 * 0.96$) at the end of the third. Therefore, your investment has gone from \$100 to \$105.80, or 5.8% during the whole period considered. This return is shown under the "Account Performance" heading of the performance summary statement and is derived for each account individually.

The "3 Years" performance column represents the annualized performance, based on the total return done over the three years period. From the above example, suppose that your initial investment is now valued at \$152.09 at the end of the third year, or a total return of 52.09%, the number in the "3 Years" column would be:

$$[(1 + 0.5209)^{1/3}] - 1 = 0.15 \text{ or } 15\%.$$

That is the same as saying that your investment has grown by an equivalent of 15% annually, for 3 consecutive years.

Total Return

This is calculated the same way as the account return above except it takes into consideration all the account values combined (i.e. US dollars, CDN dollars, Euro's, etc.), labeled in your main reporting currency, for each sub-period. Results are then linked the usual way to obtain the total periodic return. Each account's performance is weighted on the total market value of all combined accounts, using the beginning market value of each account for each sub-period.

For example, if we added a second account to the one in the previous example, that started with a value of \$1000 and made returns of 2%, -3% and 4% (it made an individual performance of 2.8976% for the quarter), the combined **Total Return** would be computed as:

$$\begin{aligned} & [(100.00 / 1100.00) * 7\%] + [(1000.00 / 1100.00) * 2\%] = 2.4545\% \text{ for month 1} \\ & [(107.00 / 1127.00) * 3\%] + [(1020.00 / 1127.00) * -3\%] = -2.4303\% \text{ for month 2} \\ & [(110.21 / 1099.61) * -4\%] + [(989.40 / 1099.61) * 4\%] = 3.1982\% \text{ for month 3} \end{aligned}$$

The total performance would then be:

$$(1.024545 * 0.9757 * 1.031982) - 1 = 0.0316 \text{ or } 3.16\%$$

This return is labeled as "Total Performance" under "Account Performance" on the client statement.

Return Since Inception

Return since inception is calculated by weighting the cash flows when the investment is purchased at different time periods. For instance, if 500 shares were purchased on January 1st, 2007 for \$10.00 and on February 1st, 2007 another 200 shares were purchased for \$12.00, the return will be more heavily influenced by the purchase in January since it has been held in the portfolio for a longer time period. If on March 1st, 2007 the stock has closed at \$8.00 the calculation for the period would be as follows:

$$\text{Ending Market Value: } 700 * \$8.00 = \$5,600$$

$$\text{Beginning Market Value: } (500 * \$10.00) + (200 * \$12.00) = \$7,400$$

Return Since Inception

$$(\$5,600 - \$7,400) / (\$5000 * 59 \text{ days}/60) + (\$2,400 * 28 \text{ days}/60) = -29.82\%$$

The time weighted return above would be lower than the average return of -32.14% due to the fact that the loss on the January purchase was less than the February purchase and this would weight higher in the calculation above due to the fact that it is held in the account for a longer time period. This return is shown in the seventh column which is titled "Return Since Inception" on the pages where the investments are detailed.