Improvements to Your Pension Account

Improvements were recently made to your pension account. You can access your pension account by going to the Human Resources web site at www.uwo.ca/humanresources and then clicking on Login to Pension Account.

Your online account now shows your investment income and total return since the beginning of the year. Rates of return are calculated using the Modified-Dietz Method, a method that takes into account the timing of contributions and withdrawals.

See below for more details about the methodology used to calculate the investment income and the rate of return.

**Income Calculation**

\[
INCOME = CB - \sum_{i}^{12} (C_i - P_i - W_i)
\]

Where:
- \(CB\) = Closing balance
- \(i\) spans from 0 to 12
- \(C_i\) = Contribution made at time \(i\) (the opening balance is considered to be a contribution at time 0)
- \(P_i\) = Payment made at time \(i\)
- \(W_i\) = Withdrawal made at time \(i\)

**Rate of Return Calculation**

\[
RoR = \left( \frac{CB - OB - \sum_{i=1}^{12} (C_i - P_i - W_i)}{OB + \sum_{i=1}^{12} w_i (C_i - P_i - W_i)} \right)
\]

Where:
- \(CB\) = Closing balance
- \(i\) spans from 1 to 12
- \(OB\) = Opening balance
- \(C_i\) = Contribution made at time \(i\)
- \(P_i\) = Payment made at time \(i\)
- \(W_i\) = Withdrawal made at time \(i\)
- \(w_i\) = Proportion of the total number of days in the period that cash flow \(i\) (contribution, payment or withdrawal) has been held in (or out of) the portfolio.
- \(RoR\) = Annual rate of return

\[
w_i = \frac{CDT - D_i}{CDT}
\]

Where:
CDT = Total number of calendar days in the period
i spans from 1 to 12
$D_i =$ Number of calendar days since the beginning of the period in which cash flow $i$
(contribution, payment or withdrawal) occurred.

Example

An investor has an account balance of $10,000 as of December 31, 2007. He makes
contributions of $500 on January 31, February 29 and March 31, 2008. His account
balance as of March 31, 2008 is $12,000. What are his income and rate of return?

Income = 12,000 – 10,000 – 1,500 = $500

\[
\text{RoR} = \frac{500}{10000 + 0.6593 \times 500 + 0.3407 \times 500 + 0 \times 500} = 4.76\%
\]

For more information about rate of return calculations, please contact Martin Bélanger,
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