

Answers about...

UNIVERSAL LIFE RATES OF RETURN

Your client's annual statement indicates a 12.9% return for the American Equity account held in their UL policy. The newspaper posts a one-year return of 26.0% for the S&P 500. Your client wants answers. Are you prepared to explain the difference in the returns?

Accounts based on the performance of indices (index accounts) or accounts based on the performance of managed funds (managed accounts) are popular investment choices with UL policy owners. Some investors aren't comfortable managing their own portfolio but still want to benefit from a diversified mix of investments. Others are satisfied with benchmark returns and prefer the ease and lower cost of accounts with returns based on an index.

You can find the rate of return for index accounts or managed accounts in a variety of places. When you try to compare the rates of return for these accounts on a UL policy statement with published annual rates of return for the underlying index or mutual fund, you may be surprised when the numbers do not match. There are valid reasons for the disparity in the numbers.

MANAGEMENT FEES

While internal sources such as the advisor website you use with Sun Life Financial display net rates of return that are adjusted for the UL management fee of each index account or managed account, outside sources such as the Morningstar website do not. The management fee will cause the net return to be lower for the account in the client's policy than for the external index or mutual fund. Since the fee is calculated each business day, as opposed to annually, the impact will vary with changes in the daily value.

INDEX CURRENCY

A factor often overlooked is the effect currency value changes will have on returns for index accounts based on a foreign index. Since UL investment accounts credit returns based on the Canadian dollar value of each index, changes in the value of the dollar will have a direct influence on the return experienced by clients. When the value of the Canadian dollar increases versus the base currency of a foreign index, the returns for the UL index accounts will be lower than the returns on the foreign index. On the other hand, when the value of the Canadian dollar decreases, returns will be higher than the returns on the external foreign index.

EXAMPLE

For example, if a client invests in an index account based on the performance of S&P 500 Composite Total Return from June 2010 to May 2011, the annual rate of return is 26.0%¹ (net 3.0% management fee with bonus). When converted to Canadian dollars, the annual rate of return is 16.6%¹ (net 3.0% management fee with bonus). This difference is caused by the conversion to Canadian dollars, which was higher against the U.S. dollar in May 2011 than June 2010.

CALCULATION METHOD

To ensure that all investors receive consistent information, the Investment Funds Institute of Canada (IFIC) has proposed that a standard formula be used across the financial services industry for calculating rates of return. This time-weighted calculation, called the Modified Dietz Method, provides investors with a percentage return indicating how their investments have performed, rather than how the index has performed. The main advantage of this method is that it does not require portfolio market valuation for the date of each cash flow. Many investors are accustomed to a simple returns formula that looks at the market value at the end of the term and finds the percentage gain or loss. One drawback of the Modified Dietz Method calculation is that you cannot take the year-end value and correlate back to the reported rate of return, since this method takes into account the time-weighted payments, unlike the formula for simple returns.

ANNUAL RETURNS

Differences in the rate of return can also result when the Modified Dietz Method is used to calculate annual returns for mutual fund accounts and UL statements. This method weighs payments and withdrawals made over time, as opposed to considering one payment made at the beginning of a period. Many transactions occur after the clients have received their annual statement. Payments made after the start of the period would not earn the same rate of return as funds paid at the beginning. It is necessary to time-weight the returns on these payments to more appropriately calculate the rate of return for each account on a statement. The same principle applies to withdrawals, since the impact on the overall rate of return would change based on the timing and amount of each withdrawal.

YEAR-END BALANCE

The Modified Dietz Method has been widely adopted in the financial industry, and under certain circumstances, such as timing of monthly payments, it can result in a different year-end balance. The following example illustrates different year-end balances based on the returns for the Canadian Equity Index Account (based on S&P/TSX 60 Total Return) in two Sun Universal Life policies issued on January 1, 2010.

In order to simplify the following example, the provincial premium tax and monthly cost of insurance is already deducted, and an additional \$200 is available for investment. This example is not intended to recommend one payment frequency over the other.

¹ Annual rate of return calculation is performed based on month-end returns using the Modified Dietz Method. Please refer to the end of this article for this formula.

	MONTHLY PAYMENTS MADE ON 1 ST OF EACH MONTH	MONTHLY PAYMENTS MADE ON 15 TH OF EACH MONTH
Beginning balance on Jan. 1	\$1,000	\$1,000
Additional payment amount	\$200	\$200
Weighted payment amount	\$200	\$103.23
Month end balance on Jan. 31	\$1,261.52	\$1,256.56
Monthly rate of return ²	5.13%	5.13%
Year end balance on Dec. 31	\$4,234.60	\$4,200.20

If this calculation is repeated for the next 11 months (or for the remainder of year), then the annualized rate of return is 35.19% for both policies, but they have a different year-end balance.

Since the value of the index is changing daily (i.e. whenever the stock markets are open for trading), the difference in year-end balance for the two policies is due to the amount and the timing that these payments have on investment returns. Investment returns for these policies are similarly affected by withdrawals, including monthly deductions for the cost of insurance.

REASONS FOR VARIATIONS

The impact of management fees, currency exchange and the timing of payments is apparent when you compare the returns in this chart using the American Equity account based on the S&P 500 Composite Total Return index returns posted on resources such as the advisor website you use with Sun Life Financial or the Standard & Poor's website.

Only the return posted on the advisor website you use with Sun Life Financial factors in the management fee and the impact of changes in currency values.

However, it does not include the effect of payments or withdrawals made throughout the year. The last two numbers in this table are pure index returns that do not include policy transactions, management fees or, in one case, changes in currency values.

	Client Statement (S&P Total Return in Cdn \$)	Annualized return for American Equity index option ⁵	Posted annual return for S&P 500 in Canadian dollars ³	Posted annual return for S&P 500 in U.S. dollars ³
Return	12.9% ⁴	13.8%	16.6%	26.0%
Source		Sun Life Financial advisor website	Standard & Poor's and Bank of Canada website as of May 2011	Standard & Poor's website as of May 2011
Includes management fee	yes	yes	no	no
Includes currency impact	yes	yes	yes	no
Includes effect of transactions	yes	no	no	no

Note: This example is for illustration purposes and past performance is not indicative of future returns.

² For monthly rate of return calculation, please refer to the end of this article for the formulas.

³ One-year returns as of May 31, 2011. The Canadian dollar return is obtained using the S&P 500 Total Returns multiplied by the currency exchange rate based on Bank of Canada website.

⁴ Rate of return is obtained from example described on first page in the Index currency/Example section.

⁵ One-year returns as of May 31, 2011.

TO DETERMINE MONTHLY RATE OF RETURN

The following Modified Dietz Method formula was used:

$$R = (\text{end balance} - \text{begin balance} - \text{cash flow}) \div (\text{begin balance} + \text{weighted cash flow}) \times 100$$

where:

R = the monthly rate of return

end balance = balance at end of the month (on January 31)

begin balance = balance at the beginning of the month (on January 1)

cash flow = payments or withdrawals made during the month

weighted cash flow = (total number of days in the month – number of days into the month that the cash flow occurred) ÷ total number of days in the month x payment amount

In the example on the previous page for payments made on the 15th:

$$\text{weighted cash flow} = (31 - 15) \div 31 \times \$200 = \$103.23$$

$$R = (\$1,256.56 - \$1,000 - \$200) \div (\$1,000 + \$103.23) \times 100$$

= 5.13% is the monthly rate of return

TO CALCULATE THE ANNUAL RATE OF RETURN

$$\text{Annualized rate of return} = [(1+R1) \times (1+R2) \times (1+R3) \times \dots \times (1+R12) - 1] \times 100$$

where:

R1 = monthly rate of return for first month

R2 = monthly rate of return for second month

....

R12 = monthly rate of return for twelfth month

In the example on the previous page for calculating the annualized rate of return:

$$[(1+0.0513) \times (1+0.0056) \times (1-0.0211) \times \dots \times (1+0.0604) - 1] \times 100 = 35.19\%$$

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