COLUMBIA
THREADNEEDLE
INVESTMENTS

Digging deeper:
Measuring performance

4. Time-weighted return

Time-weighted return

The time-weighted rate of return (TWR) is designed to eliminate the distortions caused by the timing of new inflows or outflows of money into an investment.

To do this the TWR breaks down the return for a particular period into a number of sub-periods.

Each of these sub-periods reflects the amount of money invested and the time for which it was invested.

By recalculating the return after each inflow or outflow, the TWR allows the performance of different fund managers to be compared.

The TWR uses the same formula as the HPR - multiplying the return on each individual investment period by the others to give an overall return.

Formula for calculating the time-weighted rate of return (TWR) of a fund:

1 + TWR = (1+R1) x (1+R2)

Before being able to calculate the TWR, the return over each of the individual investment periods must be calculated, using the holding period return formula.

$$(HP)R = \frac{(D + V1 - V0)}{V0}$$

> R = return on the investment

> D = income paid out

> V1 = sale price of the investment at the end of its term

> V0 = purchase price of the investment at the start of its term

Category:
Investment insights

Example

£15,000 is invested initially. Income of £600 is distributed over the first time period. At the end of the first time period the value of the investment is £17,000. At the beginning of the second time period, a further £25,000 was invested. The combined invested amount is £42,000. Over the second period a further £1,680 was distributed as income. The valuation at the end of the second period was £48,720.

Time Period 1 (TP1)

> D = income paid out - £600

> V1 = sale price of the investment at the end of its term = £17,000

> V0 = purchase price of the investment at the start of its term = £15,000

$$R = \frac{£600 + £17,000 - £15,000}{£15,000}$$

R1 = 0.17 or 17%

Time Period 2 (TP2)

> D = income paid out - £1,680

> V1 = sale price of the investment at the end of its term = £48,720

> V0 = purchase price of the investment at the start of its term = £42,000

$$R = \frac{£1680 + £48,720 - £42,000}{£42,000}$$

R2 = 0.2 or 20%

To calculate the TWR for the two time periods using this formula:

1 + TWR = (1+R1) x (1+R2)

> HPR for Time Period (TP) 1 = 0.17

> HPR for Time Period (TP) 2 = 0.20

Those figures give us the following result for the full two years:

1 + TWR = (1 + 0.17) x (1 + 0.20)

1 + TWR = (1.17) x (1.20)

1 + TWR = 1.40

TWR = 1.40 – 1 = 0.40 or 40%

Contact us

📞 0207 464 5855

✉ clientsupport@columbiathreadneedle.com

💻 columbiathreadneedle.co.uk/adviser-edge

Telephone calls may be recorded.

Important information: This document has been prepared for general information purposes only. It does not constitute advice (whether investment, legal, regulatory, tax or otherwise) provided by Columbia Threadneedle Management Limited.

COLUMBIA THREADNEEDLE INVESTMENTS