WEALTH

UNDERSTANDING YOUR PERSONAL RATE OF RETURN

Desjardins
Wealth Management
INVESTMENTS

The Canadian Securities Administrators have adopted new standards to improve the information investors receive about their investments.

Under these new standards, the money-weighted rate of return (MWRR) method will be used from now on to calculate the rate of return on your investment account. This is referred to as your **personal rate of return**.

Prior to December 31, 2016, the method used to calculate your investment account's rate of return was the time-weighted rate of return (TWRR) method.

We calculate your personal rate of return for you.

You can find it in the investment performance report that comes with your Desjardins Funds investment statements.

Main differences between the two calculation methods

	PERSONAL RATE OF RETURN MONEY-WEIGHTED RATE OF RETURN	INVESTMENT RATE OF RETURN TIME-WEIGHTED RATE OF RETURN
IMPACT OF MONETARY MOVEMENTS	Your return is impacted by the monetary movements[1] to and from your account and the timing of them	No impact on the return
WHAT'S MEASURED	The return on your investments and the impact of your monetary movements decisions	The return on your investments
WHAT IT HELPS YOU EVALUATE	The return on your investments and your own investment decisions	The decisions and performance of the portfolio manager

[1] Monetary movements include investment income (dividends and interests), deposits and withdrawals.

How monetary movements impact your return

Four years in a row, an investor deposits $5,000 at the start of the year.

Situation 1

At the start of the fifth year, the investor **deposits** $15,000. Their portfolio value goes down 10% during the fifth year.

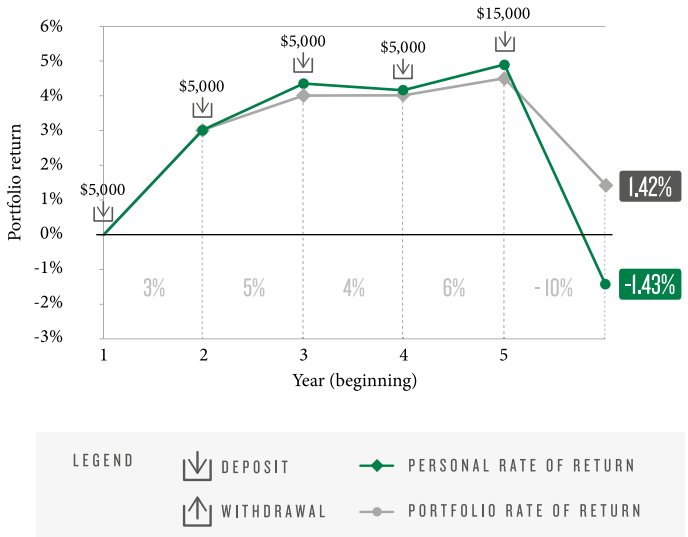
Here are the details:

DATE	RETURN	DEPOSIT	YEAR-END MARKET VALUE	GAIN/LOSS
Year 1	3.0%	$5,000	$5,150.50	$150.00
Year 2	5.0%	$5,000	$10,657.50	$507.50
Year 3	4.0%	$5,000	$16,283.80	$626.30
Year 4	6.0%	$5,000	$22,560.83	$1,277.03
Year 5	-10.0%	$15,000	$33,804.75	-$3,756.08

The deposit made at the beginning of the fifth year significantly increased the assets in the account before the 10% drop in the return. Because a larger amount of capital was involved, the positive returns from the four previous years were cancelled out.

Personal rate of return: -1.43%

Investment rate of return: 1.42%



Situation 2

At the start of the fifth year, the investor **withdraws** $15,000. Their portfolio value goes down 10% during the fifth year.

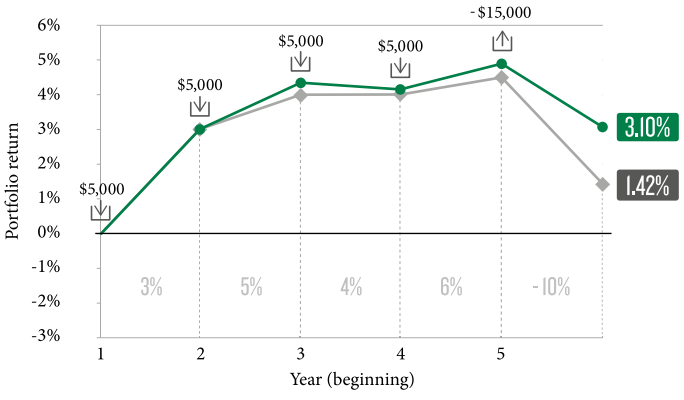
Here are the details:

DATE	RETURN	DEPOSIT	YEAR-END MARKET VALUE	GAIN/LOSS
Year 1	3.0%	$5,000	$5,150.50	$150.00
Year 2	5.0%	$5,000	$10,657.50	$507.50
Year 3	4.0%	$5,000	$16,283.80	$626.30
Year 4	6.0%	$5,000	$22,560.83	$1,277.03
Year 5	-10.0%	-$15,000	$6,804.75	-$756.08

Because the investor withdrew a large amount from their portfolio just before the drop in the return, the overall impact of the drop was minimized, in contrast to situation 1.

That's why the personal rate of return is higher in this situation (3.10%) than in situation 1 (-1.43%).

Because monetary movements don't affect the investment rate of return, it is the same (1.42%) in both situations.



Summary

IMPACT OF MONETARY MOVEMENTS ON THE DIFFERENT RATES OF RETURN[2]

MONETARY MOVEMENTS	RETURN ON YOUR ACCOUNT	
	BEFORE A POSITIVE RETURN PERIOD	BEFORE A NEGATIVE RETURN PERIOD
LARGE DEPOSIT	Personal rate of return higher than investment rate of return	Personal rate of return lower than investment rate of return
LARGE WITHDRAWAL	Personal rate of return lower than investment rate of return	Personal rate of return higher than investment rate of return
NO LARGE DEPOSITS OR WITHDRAWALS	Personal rate of return equal to investment rate of return	Personal rate of return equal to investment rate of return

Your personal annualized rate of return will differ from what may be publicly reported for each fund. That's because your personal rate of return takes into account:

+ The number of funds you hold shares in;
+ The management fees on these funds;
+ Any deposits or withdrawals you've made, and the timing of them.

Since no two investors will have the same account activity, the money-weighted rate of return method is a more accurate way of calculating your return and can better help you understand how your investments have performed.

A benchmark index, such as a stock or bond index, may help you evaluate the performance of your portfolio over a given period of time. However, a benchmark won't take into account your deposits or withdrawals, or even management fees in most cases. That's why it's difficult to draw a direct comparison between your personal total return and a benchmark.

A more meaningful measure is to compare your personal rate of return to your target return. That way, you can see whether you're on the right track to achieving your financial objectives.

[2] The method used to calculate the personal rate of return is the money-weighted rate of return. The method used to calculate the investment rate of return is the time-weighted rate of return.

Your advisor
Your best ally!

Your advisor is there to sit down with you to look at your investor profile, investment goals, investment horizon and risk tolerance, and to recommend changes you can make to your portfolio to help you achieve your financial objectives.

Your advisor is your financial partner and the best person to help you manage your assets. Their professional priority is to always put your interests first.

+ BECAUSE YOU CAN'T PUT A PRICE ON PEACE OF MIND!

LEARN MORE:

HOW IS YOUR PERSONAL RATE OF RETURN CALCULATED?

Your personal return is calculated using the money-weighted rate of return (MWRR) method.

To determine the annualized rate of return on your investments, you need to:

A.

Know the dollar amounts and dates of any deposits or withdrawals made throughout the year;

B.

Calculate the annualized rate of return using the MWRR method.

Here's an example:

You invested $100,000 in Desjardins Funds on December 31, 2010.

DECEMBER 31, 2010

$100,000

Over the next few years, you made a few purchases of units in Desjardins Funds, investing $10,000 each time. In 2015, you withdrew $10,000.

2012, 2013 AND 2014

$10,000 DEPOSITS

2015

$10,000 WITHDRAWAL

During these years, the value of your investments went up and down with the stock market, and at the end of 2015, the market value of your Desjardins Funds stood at $164,000.

DECEMBER 31, 2015

$164,000

CALCULATING YOUR PERSONAL RATE OF RETURN

On December 31, 2015, the market value of your Desjardins Funds was $164,000.

Because you invested $120,000 between December 2010 and December 2015, it appears your money grew by $44,000, or 7.33% annually.

This simple calculation, which is for illustration purposes only, might produces a rate of return of 7.33%.

INVESTMENT AMOUNT:
$120,000 = ($100,000 + (3 x $10,000) - $10,000)

CAPITAL GROWTH:
$44,000

NUMBER OF YEARS:
5

([$44,000 / $120,000]/5) * 100 = 7.33%

However, your annual rate of return isn't actually 7.33%. That number doesn't take into account the deposits and withdrawals you made and the timing of them.

To calculate your personal annualized return, you need to know **the exact dates and amounts** of all the monetary movements.

Personal return calculation formula

$$BMV + \left[\frac{M_1}{(1+R)^{(Wi)1}} + \frac{M_2}{(1+R)^{(Wi)2}} + \frac{M_3}{(1+R)^{(Wi)3}} \ldots + \ldots \right] - \frac{EMV}{(1+R)^{(Wi)n}} = 0$$

R =	personal annualized return	TBD
BMV =	market value of the account at the beginning of the period	$100,000
EMV =	market value of the account at the end of the period	$164,000
M =	monetary movements (deposits or withdrawals)	$10,000
n =	timing of monetary movements	Various dates
WI =	Di /D	
where		
Di =	number of days elapsed between the beginning of the period (December 31, 2010) and the date of the monetary movements	
D =	number of days in the year	365 days in this example

We will explain, step by step, how to calculate your personal return.

Step A

- You need to know the exact dates and dollar amounts of all your monetary movements.
- You need to know the market value at the beginning and end of the calculation period.

SUMMARY OF MONETARY MOVEMENTS				NUMBER OF DAYS ELAPSED SINCE THE BEGINNING OF THE PERIOD (DECEMBER 31, 2010)
Initial	December 31, 2010	Beginning market value	$100,000	0
1st	January 15, 2012	Deposit	$10,000	380
2nd	February 24, 2013	Deposit	$10,000	785
3th	March 18, 2014	Deposit	$10,000	1,172
4th	January 25, 2015	Withdrawal	$10,000	1,485
5th	December 31, 2015	Ending market value	$164,000	1,825

Step B

- Calculate the annualized rate of return using the money-weighted rate of return method. To do this, you'll need to find the rate of return that produces a result of zero in the formula below after adding up the present values of all the monetary movements.[3]

It's a complicated calculation that requires a computer program or application. That's why we do it for you.

Your return (R) is 6.71842%.

Here's how we arrived at that number:

$$\text{BEGINNING MARKET VALUE} + \left[\frac{\text{DEPOSIT/WITHDRAWAL 1}}{(1+\text{RETURN})^{\text{DATE 1}}} + \frac{\text{DEPOSIT/WITHDRAWAL 2}}{(1+\text{RETURN})^{\text{DATE 2}}} \ldots + \ldots\right] - \frac{\text{ENDING MARKET VALUE}}{(1+\text{RETURN})^{\text{DATE n}}} = 0$$

$$-100{,}000 + \left[\frac{-10{,}000}{(1+R)^{380/365}} + \frac{-10{,}000}{(1+R)^{785/365}} + \frac{-10{,}000}{(1+R)^{1172/365}} + \frac{10{,}000}{(1+R)^{1485/365}}\right] + \frac{164{,}000}{(1+R)^{1825/365}} = 0$$

$$-100{,}000 + \left[\frac{-10{,}000}{(1.0671842)^{1.0411}} + \frac{-10{,}000}{(1.0671842)^{2.1507}} + \frac{-10{,}000}{(1.0671842)^{3.2110}} + \frac{10{,}000}{(1.0671842)^{4.0685}}\right] + \frac{164\,000}{(1{,}0671842)^{5}} = 0$$

$$-100{,}000 + \left[\frac{-10{,}000}{(1.0700)} + \frac{-10{,}000}{(1.1501)} + \frac{-10{,}000}{(1.2322)} + \frac{10{,}000}{(1.3028)}\right] + \frac{164{,}000}{(1.3842)} = 0$$

$$-100{,}000 + \left[-9{,}346 + -8{,}695 + -8{,}115 + 7{,}676\right] + 118{,}480 = 0$$

$$-118{,}480 + 118{,}480 = 0$$

The personal annualized rate of return that gives a result of 0 for the **period is 6.71842%**.

[3] **For the purposes of this example, the beginning market value and deposits are negative values, and withdrawals and the ending market value are positive values. This may sound counterintuitive, but think of it this way: when you contribute to your investment, you're taking money out of your pocket; and when you withdraw money from your investment, you're putting it back in your pocket.**

DESJARDINS

Desjardins Group is the leading cooperative financial group in Canada and the fifth largest in the world. The scope of our product and service offer is unique, encompassing expertise in wealth management, life and health insurance, property and casualty insurance, and financial services for individuals and businesses. Desjardins has pioneered responsible investing in Canada and is a leading proponent of responsible investing across the country.

+ $260 billion in total assets[4]
+ 7 million members and clients
+ World's 5th strongest bank, 1st in North America[5]

DESJARDINS FUNDS

One of the largest Canadian mutual fund manufacturers, Desjardins Investments Inc., the manager of Desjardins Funds, offers investment products that meet the varied and evolving needs of Canadian investors. The company sets itself apart with its innovative portfolios and funds, which have been repeatedly honoured by the industry.

+ $27 billion in assets under management[6]
+ More than 80 mutual funds and 3 families of portfolios
+ More than 55 years of experience and the trust of close to 500,000 investors

[4] As at September 30, 2016
[5] World's strongest banks, Bloomberg 2015
[6] As at December 31, 2016

Desjardins Funds are not guaranteed, their value fluctuates frequently and their past performance is not indicative of their future returns. Commissions, trailing commissions, management fees and expenses all may be associated with mutual fund investments. Please read the prospectus before investing. Desjardins Funds are offered by such registered dealers as Desjardins Financial Services Firm Inc., a mutual fund dealer belonging to Desjardins Group that distributes the Funds in caisses throughout Quebec and Ontario, as well as through Desjardins Financial Centre.

DESJARDINS.COM/DESJARDINSFUNDS
DESJARDINSFUNDS.COM

Desjardins
Wealth Management
INVESTMENTS

100%
This document is printed on Rolland Enviro paper.

FKF44153 (01-17)