

# Morningstar® Office Tip Sheet: Using the IRR Diagnostic Report to Troubleshoot Return Percentage Errors

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Now that you've uncovered an unusually high or low performance number within the Global Performance Summary, the next step is to run the **Internal Rate of Return Diagnostic Report** for each individual account in question.

This report won't detail exactly what the error is, but it allows you to identify the largest cash flows and evaluate how they affect the overall performance number.

For example, say you open a small portfolio and leave it alone for the first six months. Over the second six months, you make several deposits and buy a large amount of stock. The return relative to the original market value for the latter half of the year will have a larger impact on the annual performance number than the first half of the year.

This report will help to identify which cash flows contribute more heavily to the overall performance number.

## Overview

This report can be run at the individual Account level, and details the following information:

- ▶ Beginning Market Value
- ▶ Ending Market Value
- ▶ Date of each cash flow
- ▶ Amount of each cash flow
- ▶ Time Fraction
- ▶ Discount Cash flow calculation
- ▶ Period Rate of Return
- ▶ Annualized rate of return

For each cash flow, you'll see the dollar amount listed.

## How do I interpret the IRR Diagnostic Report?

A	B	C	D	E	F
<b>Report Name: Internal Rate of Return calculation</b> <b>Report Date: 1/1/2002 - 9/30/2015</b> <b>Printed on: 12/17/2015</b> <b>Report Currency: USD</b> <b>Client/Group: Carina Cristofalo1</b> <b>Account Name: Example 4 (IRR)</b> <b>Account Number: 5647</b> <b>Fee Type: Net of Fees</b>					
	<b>Date</b>	<b>Amount</b>	<b>Time Fraction (ni/N)</b>	<b>Discounted cash flow Fvi*(1+R)^(ni/N)</b>	<b>IRR (%)</b>
Beginning Value	1/1/2002	0	1	0	
Cash flow as of 01-01-2002	1/1/2002	-	1	-27.94503	
Cash flow as of 01-01-2013	1/1/2013	-2,263.00	0.1996	-4,399.15	
Ending Value	9/30/2015	4,427.10	0	4,427.10	
<b>Period Rate of Return</b>					<b>2,694.50</b>
<b>Annualized Rate of Return</b>					<b>27.4121</b>
<b>Note:</b> Negative amount is cash inflow; postive amount is cash outflow.					
IRR calculation formula: $PV*(1+R) = \text{Sum of } Fvi*(1+R)^{(ni/N)} + Fve$ Where PV is Beginning Value Fvi is value for cash flow i ni is number of days to end date for cash flow i R is Period IRR Fve is Ending Value N is number of days in the period					

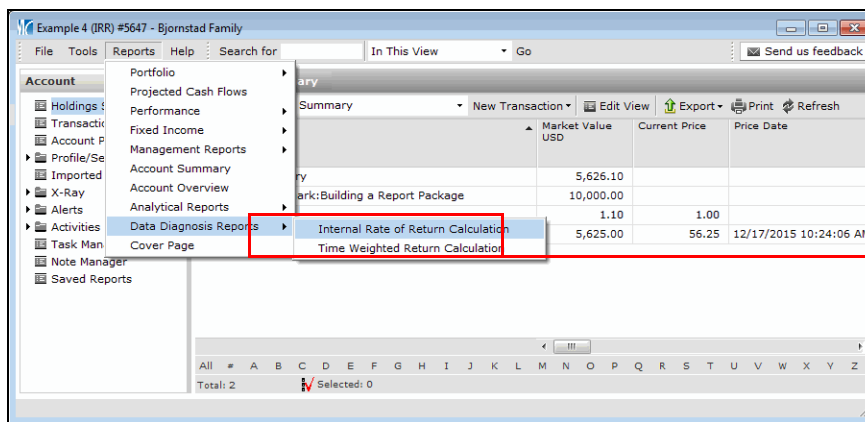
This example shows how two cash flows: the first is a \$1 deposit occurring in 2002 and a deliver-in of \$2263 in 2013 affect the overall performance number.

Note that a negative amount is a cash inflow.

To run the report at the Account level, complete the following steps:

1. From the Clients page under the Client Management tab, double click on the **Client** you want to run the report for. A new window will open.
2. From the Client window, double click on the **Account** you want to run the report for.

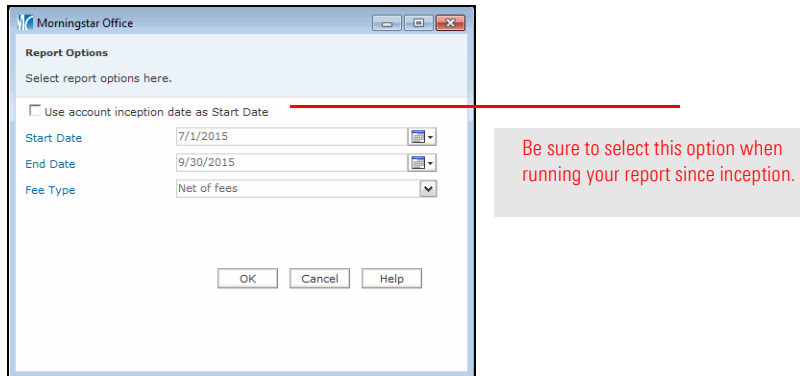
### How do I run the IRR Diagnostic Report?



The IRR Calculation report is only available at the individual Account level.

3. From the Account window, click **Reports...Data Diagnosis Reports...IRR Diagnosis Reports**.

- From the report options dialog box, select the **report options** you want to use in your report.



- Click **OK**.

► Click [here](#) to view a companion video to this document.