



ICAEW Excel 06 MIRR

In this video, I'm going to talk to you about the MIRR function in Excel, which will calculate the modified internal rate of return of a stream of cash flows.

So, this is similar to the IRR function, but it corrects a couple of limitations within the IRR function, the internal rates of return function. So, IRR itself will provide the discount rate, which provides zero net present value, assuming funding and reinvestment rate are the same as the internal rate of return calculated, which is unlikely. Modified internal rate of return provides a slightly more realistic outcome and it includes a financing rate, in other words, what is the financing rate for the funds invested in the project, whether that's the cost of debt or cost of equity, and also what is the reinvestment rate, in other words, surplus cash proceeds during the term of the project, at what rate can they be reinvested at the bank, modified internal rates of return.

Best illustrated with an example. As you can see here, we've got 10 years worth of cash flows, you've got an initial investment of thousand, and then you've got subsequent positive cash flows that you can see that in column C. So modified internal rate of return requires the cash flows themselves, the funding rate, the financing rate, in other words, at what rate has the 10000 been achieved on day one, and then the reinvestment rate, which is what would be the rates of return on reinvestment of proceeds as time passes, say, for example, year two, there's one thousand that comes in year three, the six, three, four that comes into that that amount that comes in could be put into a savings account to achieve a particular rate.

So we're going to assume here that the funding rate or the financing rate is six percent and the reinvestment rate for surplus cash is one percent. I'm going to calculate the modified internal rate of return. So let's get started equals, MIRR, open brackets. So initially we simply point to the cash flows. So let's go ahead and do that. So that's about 10 years worth of cash flows, comma. Now we need to point to the finance rate, the funding rate, which for us is the six percent and see up here I'm going to point to this here, comma, and now I'm going to point to the reimbursement rate which for us is the one percent and that's it. All I need to do now is close my brackets and this should give me the modified internal rates of return. Eleven point eight percent.