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The Limited Relevance of the Multiple *IRR*s

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Abstract

We find that the incidence of multiple internal rate of return (IRR) pitfalls are rare. This might partially explain the widespread use of IRRs by practitioners. When a project's cash flow has only two sign variations, the IRR rule is simple. For analyzing the case of three or more sign variations in the cash flow, we assume a non-negative sum of the future anticipated cash flows. Given this assumption, we present necessary and sufficient conditions for an investment's cash flows with three or more sign variations to have multiple IRR solutions. Based on these conditions we show that the confusing multiple IRR solutions are only possible under unrealistic large fluctuations of the cash flows.