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# TECHNICAL NOTE—THE INTERNAL RATE OF RETURN (IRR) AS A FINANCIAL INDICATOR

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## Abstract

In their recent paper [Tang and Tang \(2003](#), pp. 69–78) revive a longstanding controversy—net present value (NPV) versus internal rate of return (IRR)—by characterizing the NPV as an economic indicator and the IRR as a financial one. The paper implies that this distinction justifies ranking financial alternatives by ranking their IRRs. In the current article, it is argued that the direct IRR ranking does not necessarily provide the same evaluation environment—and therefore a fair comparison—for each alternative involved, and that the incremental ranking approach is needed to remedy this shortcoming. The article also points out that Tang and Tang's numerical examples of simple projects with one sign change in their cash flow patterns do not address the problem of multiple IRRs, which consequently renders Tang and Tang's ranking approach dysfunctional. It is demonstrated that the concept of a true rate of return,

substituting for the non-performing IRR and applied in conjunction with the incremental approach, provides an adequate tool for ranking mutually exclusive projects or a project's technical or financial alternatives.

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## Notes

1 The term “True Rate of Return” was adopted from [Adler \(1970\)](#).

2 According to [Bernhard \(1962\)](#), footnote 3, p. 22), the term “Unrecovered Investment,” also called “Unrecovered Balance” ([Bussey, 1978](#)), was first used by the [National Association of Accountants \(1959\)](#).

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## Additional information

### Notes on contributors

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MIROSLAW M. HAJDASINSKI holds a B.Sc. and an M.Sc. in mining engineering from the Technical University of Mining and Metallurgy (AGH) in Cracow, Poland. He earned his Ph.D. in mine economics from the same university. Subsequently, Dr. Hajdasinski conducted research at the Technical University Clausthal, Germany (Department of Mining Engineering and Mine Economics), and at the Technical University Eindhoven, The Netherlands (Department of Industrial Engineering and Management Science). Late in 1982, he joined Laurentian University of Sudbury, Ontario, Canada, where he currently works as a professor in the School of Engineering. Dr. Hajdasinski's research interests embrace project evaluation techniques and applications of engineering economy and operations research to mine planning and evaluation, as well as to mine-design optimization. He has published numerous articles in international journals and presented papers at national and international conferences on the above subjects. Dr. Hajdasinski is a professional engineer registered in the Province of Ontario.

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