Supporting investment profitability analysis and decision-making with real option analysis is an issue of increasing interest among both practitioners and managers. Real option analysis brings important advantages over the most often used discounted cash-flow methods as it is able to show the value of potential and flexibility in projects and brings forward a more risk conscious approach to investment valuation. Thinking about the available real options is a complement to the toolkit of managers responsible for investment profitability planning; being able to quantify the value of real options is of considerable added-value to the analysis, since it also means being able to value potential and the involved risks.

From the practitioner point of view, the majority of the academic research on real options is concentrated on theoretical issues, with a rather low added value to the industry. More application oriented real option research is needed and this needs to be reflected in the academic literature on real options.

For this purpose, this special issue presents some new progress in applying real option analysis and valuation to real world problems in a number of industries. After a double blind peer review and some rounds of revisions, six papers were selected to be included in this special issue; the papers reflect different approaches to real option valuation with applications to different industries. The authors of the selected papers are from Canada, Italy, Japan, Norway, and Finland.

The selected papers include: (1) a real options analysis of closing or not closing a production facility in the paper industry by Markku Heikkilä and Christer Carlsson; (2) a duopoly real options model applicable to the electricity markets and farming by Makoto Goto, Ruyta Takashima, and Motoh Tsujimura; (3) a real options application of an optimization of a waste water plant expansion by Yuri Lawryshyn and Sebastian Jaimungal; (4) valuation of operational flexibility in a hydropower production setting by Frode Kjærland and Berner Larsen; (5) a risk evaluation of put-or-pay contracts related to waste management by Nicola Constantino and Roberta Pellegrino; (6) a valuation of area development construction projects as compound real options by Mikael Collan.

I would like to thank the Journal of Applied Operational Research for the opportunity to contribute this special issue. I also thank the referees for their efforts in reviewing the submissions and the authors for submitting their work to the special issue.

It is my sincere wish that the papers published in this special issue are of value to academic researchers and business practitioners and provide a clearer sense of direction for further research. I also hope this special issue will inspire researchers in the field of real options and mathematical finance alike to extend their work more towards application and to present the real world applications and application possibilities of their work to the academic and the practitioner communities.

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