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(Signed) ___________________________

Nathan Brady
DEDICATION

To my wife Tobey for her unwavering support of my academic pursuits over the years, and to my daughter Kora for reminding me that sometimes playtime comes first.
ACKNOWLEDGMENTS

Throughout the writing of this dissertation, my advisor, Professor Stephen Chen has been a fantastic guide. While I’m sure he understood that the journey would be long and the challenges great, he always provided just the right amount of encouragement to keep me going and the guidance to stay on track.

Thank you to Dr. Kelly Welch for introducing me to real options during the MBA program at the University of Kansas. Had it not been for his challenge to include them in a capstone project, I would have never taken interest in them and may not have pursued the DBA.

Thank you to the late Professor Mark Hirschey for introducing me to the real world of finance and investing. Rare is the day where I do not think of one of your nuggets of wisdom. May your soul rest in peace, professor.

Finally, I’d like to express my gratitude to The University of Newcastle, Australia, to its program administrators, and, in particular, to Sam Doherty, for putting together the postgraduate program that made this endeavor possible, even from the United States.
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ABSTRACT

Over the past two decades, a significant amount of academic knowledge has been created on how to apply real options analysis to business investments. Despite the many apparent advantages of using real options to value projects, the approach has not found favor with managers in practice. Some critics claim that the method is untrustworthy and might encourage too much risk taking. This dissertation provides an exploration of risk biases, viewed through the lens of prospect theory, as a potential cause for the mistrust toward real options. Using evidence from a survey of 67 business school students, the results showed that participants generally evaluated options in a manner consistent with prospect theory’s S-shaped utility function. This research agrees with prior findings that buyers will price options at a discount and adds to the literature by confirming a new hypotheses that call options are consistently discounted more than put options of similar expected value. Additionally, evidence is provided that, in agreement with prospect theory, small probabilities cause distortions in options pricing. In general, pricing biases were found to be dependent on the framing of the scenario as either a gain or a loss and whether or not there were small probabilities involved. These findings bring into question the applicability of standard risk measures, such as discount rates derived from opportunity costs, to options scenarios.

Keywords: Real options, prospect theory, expected utility, options pricing, risk aversion