



NORTH-HOLLAND

International Review of Economics and Finance  
200 (2003) xxx–xxx

---

**IREF** International  
Review of  
Economics  
& Finance
 

---

# Capital investment timing and convertible debt financing

Timo Korkeamaki<sup>a</sup>, William T. Moore<sup>b,\*</sup>

<sup>a</sup>*School of Business Administration, Gonzaga University, Spokane, WA 99258, USA*

<sup>b</sup>*Moore School of Business, University of South Carolina, Columbia, SC 29208, USA*

Received 5 August 2002; received in revised form 31 January 2003; accepted 14 April 2003

---

## Abstract

We provide preliminary evidence that firms time capital investment decisions in a manner consistent with prescriptions from the real options literature. A prominent model of investment timing implies that firms with high-expected growth, high volatility, and low capital costs should defer investment longest. We examine capital expenditure patterns for a sample of 719 firms following issuance of convertible bonds because of the hypothesized role of these instruments in sequential investment. The findings are consistent with predictions: i.e., firms exhibiting high-growth prospects, high volatility, and low capital costs tend to defer subsequent investment longer.

© 2003 Published by Elsevier Inc.

*JEL classification:* G31; G32

*Keywords:* Capital investment; Investment timing; Sequential financing

---

## 1. Introduction

Dixit and Pindyck (1994) and McDonald and Siegel (1986) show how a value-maximizing firm can time its capital outlays to maximize net present value. The model implies that a capital project should be undertaken when the project's value exceeds the required outlay by an amount that depends on cash flow volatility, expected growth in project value, and the firm's cost of capital. Expected growth in value and cash flow volatility represent benefits of waiting to invest, while the firm's cost of capital is a cost of deferring investment.

---

\* Corresponding author. Tel.: +1-803-777-4905; fax: +1-803-777-6876.

*E-mail address:* moore-ted@sc.edu (W.T. Moore).