Title: External Cost of Leverage Adjustment: Evidence from Defined Benefit Pension Plans

Authors: Tae-Nyun Kim, Kihun Kim

PII: S0148-6195(16)30115-1
DOI: https://doi.org/10.1016/j.jeconbus.2018.01.001
Reference: JEB 5799

To appear in: *Journal of Economics and Business*

Received date: 18-12-2016
Revised date: 11-1-2018
Accepted date: 18-1-2018

Please cite this article as: Kim, Tae-Nyun., & Kim, Kihun., External Cost of Leverage Adjustment: Evidence from Defined Benefit Pension Plans.*Journal of Economics and Business* https://doi.org/10.1016/j.jeconbus.2018.01.001

External Cost of Leverage Adjustment: Evidence from Defined Benefit Pension Plans

First author: Tae-Nyun Kim (Corresponding author)
School of Business, The College of New Jersey, 2000 Pennington Road, Ewing, NJ 08628-0718, U.S.A., email: kimt@tcnj.edu<mailto:kimt@tcnj.edu>, Phone: +1.609.771.2828, Fax: +1.609.637.5129.

Second author: Kihun Kim
Farmer School of Business, Miami University, 501 E. High St., Oxford, OH 45056, U.S.A., email: kimk5@miamioh.edu<mailto:kimk5@miamioh.edu>, Phone: +1-513-529-3948.

Highlights
• Mandatory contributions of DB pension plans are employed as an external shock.
• External shock changes a firm's speed of adjustment toward its target leverage.
• The significant impact of external shock proves that firms actively adjust their leverage.
• The impact of external shock can be heterogeneously determined.
• Our results are robust when using system GMM to reduce estimation bias.

Abstract

This paper investigates the influence of external cost shock on the speed of adjustment (SOA) toward target capital structure. To look at the impact of an exogenous shock on the speed of adjustment, we employ mandatory contributions (MCs) of defined benefit (DB) pension plans as a measure of the external shock, and find a significant impact of MCs on SOA toward target leverage. This impact of MCs on SOA is negative and more significant for over-levered firms, whereas it is positive but less significant for under-levered firms. This result demonstrates that firms, especially over-levered firms, adjust to their target leverage actively rather than passively. Additionally, we show that this impact of MCs on SOA is heterogeneously determined for the firms with different levels of leverage volatility and managerial entrenchment. Our results are robust when using system GMM estimation to reduce the bias in estimation.

JEL Classification: G23; G30; G32
Keywords: defined benefit pension plans; mandatory contributions; dynamic capital structure; speed of adjustment; target leverage