## Endogenous Entry To Security-Bid Auctions\*

## Takeharu Sogo<sup>†</sup>and Dan Bernhardt<sup>‡</sup> November 10, 2015

## Abstract

We endogenize entry to a security-bid auction, where participation is costly, and bidders must decide given their private valuations whether to participate. We first suppose that the minimum reserve security-bid yields the seller an expected revenue equal to the asset's stand-alone value to the seller. Demarzo et al. (2005) establish that with a fixed number of bidders, auctions with steeper securities yield the seller more revenues. Counterintuitively, we find that auctions with steeper securities also attract more entry, further enhancing the revenues from such auctions. We then establish that with optimal reserve securities, auctions with steeper securities always yield higher expected revenues.

JEL-Classification:D44; G3

Keywords: Auctions with participation costs; Security-bid auctions; entry

M.D.Bernhardt@warwick.ac.uk

<sup>\*</sup>We thank Tingjun Liu for helpful comments.

<sup>&</sup>lt;sup>†</sup>Department of Economics, the University of Illinois at Urbana-Champaign, USA; Faculty of Global Business, Osaka International University, Japan. Email: sogou@oiu.jp <sup>‡</sup>University of Illinois, danber@illinois.edu and University of Warwick,