

Portfolio Liquidity and Security Design with Private Information[†]

Peter M. DeMarzo (*Stanford University*)

David M. Frankel (*Melbourne Business School*)

Yu Jin (*Shanghai University of Finance and Economics*)

This Revision: May 5, 2020

ABSTRACT. A privately informed seller seeks to liquidate a portfolio to raise cash. Each asset's liquidity thus depends on the impact of its sale on the value of the entire portfolio. We demonstrate the importance of cross-signaling and derive sufficient conditions for a liquidity "pecking-order" that determines the order of sale. For assets backed by a common pool, liquidity naturally aligns with seniority. Finally, we extend the portfolio liquidation game to consider security design, and demonstrate the optimality of pooling securities and selling senior tranches or debt secured by the pool, with retention increasing in asset quality or informational asymmetry.

[†] DeMarzo: Stanford, CA 94305-5015; pdemarzo@stanford.edu. Frankel: 200 Leicester St., Carlton, VIC 3053, Australia, d.frankel@mbs.edu. Sadly, our coauthor Yu Jin died in 2018; we dedicate this paper in his honor. We are grateful to Michael Fishman for useful comments, as well as seminar participants at Australian National University, the University of Cincinnati, Fudan University, the Haas School of Business, FRB-Minneapolis, University of Western Ontario, and the 2018 World Finance Conference, and to Ashwin Alankar for research assistance. This paper subsumes and generalizes the results of a similarly named working paper (DeMarzo 2003).