Correlated Demand Shocks and Asset Pricing
Byungwook Kim

Executive Summary

Recent research documents two stylized facts. First, financial markets are surprisingly price inelastic, implying that nonfundamental demand shocks can have large impacts on asset prices. Second, demand shocks are correlated across investors for unobserved reasons, and these shocks explain up to 81 percent of the cross-sectional stock return volatility. Given the economic significance, it is important to broaden our understanding of what determines correlated demand shocks in the first place and their asset pricing implications.

This paper proposes a mechanism through which institutional investors' correlated demand shocks provide a source of risk in asset pricing. The key insight is that institutional investors' incentives to beat a similar market index (e.g., S&P 500) induce them to act similarly. Specifically, when the market index performs better, more institutional investors struggle to beat the market and thus have a higher incentive to perform better. To catch up with market performance, institutional investors increase the equity exposure of their portfolios by buying more stocks. Therefore, they become net buyers of stocks during market upswings. This risk-taking strategy typically pays off since market performance is positive on average. However, if the market unexpectedly falls, institutional investors perform poorly due to their higher equity allocation, and its counterpart, lower cash balances, force them to liquidate their positions to meet outflows. As such, institutional investors become net sellers of stocks during market downturns.

These effects suggest that institutional investors' stock demand covaries with overall market movements, potentially amplifying stocks' market betas. I develop and estimate a model investigating the cross-sectional variation in stocks' exposure to institutional investors' correlated trades. The estimated model shows that stocks with higher exposure to these correlated demand shocks have higher market betas and risk premia due to the increased market risk. This endogenous risk commands an annual return premium of up to 8.52 percent in decile portfolios, which is quantitatively explained by the differences in market betas across the portfolios.

The increased market risk materializes in bad times, such as in the Global Financial Crisis of 2008, as stocks with high exposure to correlated demand shocks experience massive selling pressure from their institutional stockholders. As a result, stocks with higher exposure to correlated demand shocks experience larger price crashes during market downturns.