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Margin-based Asset Pricing and Deviations from the Law of One Price

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Abstract

In a model with heterogeneous-risk-aversion agents facing margin constraints, we show how securities′ required returns increase in both their betas and their margin requirements. Negative shocks to fundamentals make margin constraints bind, lowering risk-free rates and raising Sharpe ratios of risky securities, especially for high-margin securities. Such a funding-liquidity crisis gives rise to "bases," that is, price gaps between securities with identical cash-flows but different margins. In the time series, bases depend on the shadow cost of capital, which can be captured through the interest-rate spread between collateralized and uncollateralized loans and, in the cross-section, they depend on relative margins. We test the model empirically using the credit default swap–bond bases and other deviations from the Law of One Price, and use it to evaluate central banks′ lending facilities.

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