

Preliminary and Incomplete— Comments Welcome

# Asset Pricing with Skewed Payouts

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I examine how investors' preference for skewness impacts the price of limited liability equity. Using the actual probability density function of equity payouts, I obtain equity pricing relations that directly link investors' risk preferences to the skewness induced by the limited liability feature of equity. This approach differs from standard valuation techniques, which arrive at equity pricing relations using the risk-neutral density function of equity payouts.

I show expected equity returns may decline as leverage increases for firms with high asset systematic risk and low asset idiosyncratic risk. For these firms, as leverage increases, the value of the positive skewness induced by limited liability dominates compensation for systematic risk.

The results help explain the puzzling empirical relation between equity returns and financial distress. Equity returns for low book-to-market firms decline as financial distress and leverage increase (Dichev (Journal of Finance, 1998), Griffin and Lemmon (Journal of Finance, 2002), Vassalou and Xing (Journal of Finance, 2004)). Both Dichev (1998) and Griffin and Lemmon (2002) attribute the decline in average returns as leverage increases to investors' misperceptions of risk. In contrast, I show that when book-to-market ratios are negatively related to systematic risk, the declines are driven by value of the skewness induced by limited liability.

Keywords: Equity returns, skewness, limited liability, call option, Stein's lemma, skew normal distribution

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