

Simple Market Evidence of Financial Distress

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ABSTRACT

Simple market evidence can help courts answer important questions. One such question is whether a corporation is financially-distressed in the sense of having a substantial probability of bankruptcy. This article demonstrates the power of stock market evidence to distinguish firms that are financially distressed from those that are not in a transparent manner. I show that each of (1) prior one-year stock returns, (2) stock price, (3) stock market capitalization, and (4) market leverage (the ratio of stock market capitalization to the face value of debt) on its own achieves far better predictive performance than the Altman (1968) Z-score, and the same or better level of predictive performance than more recent models presented by Shumway (2001) and Bharath and Shumway (2008). The only ‘model’ needed for these individual variables is simple thresholding, that is, predicting bankruptcy for a magnitude above the threshold and no-bankruptcy below. A two-feature model that linearly weights prior one-year stock return and market leverage, the two most powerful individual features, achieves best-in-class performance. By using model optimization that best balances precision (the percentage of firms predicted to file for bankruptcy that file for bankruptcy) and recall (the percentage of all bankrupt firms predicted to file for bankruptcy) in the harmonic mean of both (the F_1 -score) the model provides one reliable way of determining whether or not a firm is reliably financially distressed.