
Occasional Paper

Hedge Fund Dynamic Market Sensitivity

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Abstract

Many hedge funds attempt to achieve high returns by employing leverage. However, it is difficult to track the degree of leverage used by hedge funds over time because detailed timely information about their positions in asset markets is generally unavailable. This paper discusses how to combine shrinkage variable selection methods with dynamic regression to compute and track hedge fund leverage on a time-varying basis. We argue that our methodology measures leverage as well as hedge fund sensitivity to markets arising from other sources. Our approach employs the lasso variable selection method to select the independent variables in equations of hedge fund excess returns. With the independent variables selected by the lasso method, a state space model generates the parameter estimates dynamically. The hedge fund market sensitivity indicator is the average of the absolute values of the parameters in the excess return equations. Our indicator peaks at the time of the Long Term Capital Management meltdown in 1998 and again at a critical time in the 2008 financial crisis. In the absence of direct information from hedge fund balance sheets, our approach could serve as an important tool for monitoring market sensitivity and financial distress in the hedge fund industry.

Keywords: hedge fund leverage and market sensitivity, state space model, dynamic regression, lasso method

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