



## [The Macroeconomic Shock with the Highest Price of Risk](#)

CFM-DP2016-23

Gabor Pinter<sup>1</sup>

<sup>1</sup>Bank of England

My paper takes up the long-standing challenge of finding a macroeconomic explanation behind the cross-sectional variation in stock returns. I find that a single structural shock, that demands the highest possible risk premium in a standard macroeconomic VAR, explains more of the cross-section of stock returns than the 3-factor Fama-French model can. This shock is highly (>70%) correlated with technology news shocks studied by the macroeconomics literature. This is striking given that my identification strategy has nothing to do with the strategies used to identify news shocks, and my VAR does not even contain a measure of technology as an observable. My results provide strong independent support for the role of technology news shocks in explaining business cycles as well as the cross-sectional variation in stock returns.

The starting point of my analysis is a standard vector autoregression (VAR) model of a small set of macroeconomic variables. I make only one assumption in my identification scheme: I propose to directly look for a single structural shock that demands the highest possible level of risk premium when pricing the cross-section of stock returns. Mechanically, this  $\lambda$ -shock is identified as the one that, if used as a factor in the two-pass procedure of Fama-Macbeth (1973) applied to the FF25 portfolios, would generate the highest estimated value for the associated factor risk premium. I also show that this identification strategy is equivalent to searching for the structural shock whose corresponding 1-factor model has the lowest possible sum of squared pricing errors.

In addition, I highlight the empirical link between two largely unconnected literatures on consumption based asset pricing and on macroeconomic news shocks.