

# Asset Prices in a Production Economy with Long Run and Idiosyncratic Risk\*

Ivan Sutóris

CNB<sup>†</sup>, CERGE-EI<sup>‡</sup>

June 19, 2018

## Abstract

This paper studies risk premia in an incomplete-markets economy with households facing idiosyncratic consumption risk. If the dispersion of idiosyncratic risk varies over the business cycle and households have preference for early resolution of uncertainty, asset prices will be affected not only by news about current and expected future aggregate consumption (as in models with a representative agent), but also by news about current and future changes in cross-sectional distribution of individual consumption. I investigate whether this additional effect can help to explain high risk premia in a production economy, where the aggregate consumption process is endogenous and thus can potentially be affected by the presence of idiosyncratic risk. Analyzing a neoclassical growth model combined with Epstein-Zin preferences and a tractable form of household heterogeneity, I find that countercyclical idiosyncratic risk increases the risk premium, but also effectively lowers willingness of households for intertemporal substitution and thus changes dynamics of aggregate consumption. Nevertheless, with the added flexibility of Epstein-Zin preferences, it is possible to both increase risk premia and maintain the same dynamics of quantities if we allow for higher intertemporal elasticity of substitution at the individual level.

**JEL:** E13, E21, E44, G12

**Keywords:** incomplete markets, idiosyncratic risk, production economy, risk premium

---

\*Email: [ivan.sutoris@cerge-ei.cz](mailto:ivan.sutoris@cerge-ei.cz). This research was supported by DYME, a Czech Science Foundation Project No. P402/12/G097. I am grateful for discussions or feedback to to Volha Audzei, Jan Brůha, Marek Kapička, Michal Kejak, Michal Pakoš, Ctirad Slavík, Sergey Slobodyan and Alexis Toda. Any remaining errors are my own. The views expressed here are those of the author and not necessarily those of Czech National Bank or CERGE-EI.

<sup>†</sup>Czech National Bank, Na Příkopě 28, 115 03 Prague 1, Czech Republic

<sup>‡</sup>CERGE-EI, a joint workplace of Charles University and the Economics Institute of the Czech Academy of Sciences, Politických vězňů 7, 111 21 Prague, Czech Republic