

Ambiguous Business Cycles

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January 2011

Abstract

This paper considers business cycle models with agents who are averse not only to risk, but also to ambiguity (Knightian uncertainty). Ambiguity aversion is described by recursive multiple priors preferences that capture agents' lack of confidence in probability assessments. While modeling changes in risk typically calls for higher order approximations, changes in ambiguity in our models work like changes in conditional means. Our models thus allow for uncertainty shocks but can still be solved and estimated using simple 1st order approximations. In an otherwise standard business cycle model, an increase in ambiguity (that is, a loss of confidence in probability assessments), acts like an 'unrealized' negative news shock: it generates a large recession accompanied by ex-post positive excess returns. Based on an estimated model on US data, we find that ambiguity shocks have the potential to be a major driving source of business cycle fluctuations. The welfare cost of business cycles is then substantially larger than that implied by standard risk-based calculations.

Key Words: ambiguity aversion, uncertainty, business cycles.

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