# Financial Crises & Fluctuations in Uncertainty

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Discussion by David Backus
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## Uncertainty and business cycles

Nice paper about uncertainty and business cycles

- I wish I'd had time to read it

Facts about risk in recessions

- Fact 1: Risk spreads go up
- Fact 2: Cross-sectional dispersion goes up

Questions

- Is uncertainty central to business cycles?
- Uncertainty about what?
- Can uncertainty account for "wedges"?

# Uncertainty and business cycles

Nice paper about uncertainty and business cycles

- Good issue, interesting focus on financial frictions

Facts about risk in recessions

- Fact 1: Risk spreads go up
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Questions

- Is uncertainty central to business cycles?
- Uncertainty about what?
- Can uncertainty account for "wedges"?

# Approach 1 (Gourio)

Representative agent business cycle model with

- Stochastic variation in uncertainty (aggregate productivity)
- Magnified by recursive preferences
- Smooth technology

Increases in uncertainty generate

- Increases in risk spreads (fact 1)
- Declines in investment, employment, and output
- Wedge in foc for investment

Open issues

- No heterogeneity of households or firms (silent on fact 2)
- No labor wedge
- Uncertainty is an input, not explained

# Approach 2 (Bloom)

Firm's investment problem

- Stochastic variation in uncertainty (micro and macro)
- Nonconvex investment technology
- Partial equilibrium, uncertainty not priced

Increases in uncertainty generate

- Declines in aggregate investment, employment, and productivity
- Increases in micro dispersion? (fact 2)

Open issues

- No risk spreads (silent on fact 1)
- No labor wedge — no consumers to have a foc
- Uncertainty is an input, not explained

# Approach 3 (Arellano-Bai-Kehoe)

Business cycle model with

- Stochastic variation in uncertainty (micro)
- Heterogeneous firms face financial frictions
- Smooth technology, no capital
- Representative household

Increases in uncertainty generate

- Declines in aggregate employment and output
- Larger labor wedge (reflects financial frictions)

Open issues

- Wider corporate risk spreads? (fact 1)
- Increases in micro dispersion? (fact 2)
- Uncertainty is an input, not explained

# Questions

Does micro uncertainty generate macro uncertainty?

Chapter 11? Conglomerates?

Can micro uncertainty be an output? [Clementi-Palazzo]

Why the odd interest rate response?

Would partial equilibrium deliver some of this at lower cost?

# Partial list of related work

Cyclical behavior of asset returns

- Ang-Piassezi-Wei, Atkeson-Kehoe, Campbell-Cochrane, Fama-French, Gilchrist-Zakrajsek, Mueller, Backus-Routledge-Zin

Cyclical behavior of cross-section dispersion

- Lillien, Loungani, Storesletten-Telmer-Yaron

Business cycle models with uncertainty shocks

- Gourio, Justiano-Primiceri

Firm dynamics and business cycles

- Bloom, Clementi-Palazzo, Cooley-Quadrini-Marimon