Discussion of "International Recessions" by Perri and Quadrini

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[1]Opinions are mine and not necessarily those of the Federal Reserve Board or its staff.

Key messages of Perri-Quadrini

1. In a financially integrated world, time-varying borrowing constraints (LTV ratios) can generate output fluctuations that are perfectly synchronized across countries.

2. If borrowing constraints are only occasionally binding, they can generate multiple equilibria with different levels of market prices of collateral.

3. Effects of shocks are asymmetric depending on whether borrowing constraints are binding.

▶ Comments on the model

▶ Fundamentals-based explanations vs. multiple equilibria: Policy implications?

▶ Evidence on fundamentals vs. multiple equilibria from euro area sovereign bond spreads?

Comments on the model

- Enforcement constraint on intratemporal loans l_t in fixed-capital model is

$$\xi_t \bar{k} \geq l_t + \frac{b_{t+1}}{R_t}$$

- ξ_t is known at the time that l_t is set. In version with endogenous ξ, it can take two values $\bar{\xi}$ and $\underline{\xi}$.
- Self-fulfilling expectations equilibria:
  - Firms borrow up to limit, $\xi = \underline{\xi}$
  - Firms don't borrow up to the limit, $\xi = \bar{\xi}$.

Comments on the model

- ▶ Why would firms not always want to borrow up to the constraint?
  The enforcement constraint may be binding only occasionally, in particular, after a large and unexpected decline in ξ ... On the other hand, an increase in ξ may leave the enforcement constraint non-binding without direct effects on the demand of labor.

- ▶ If this is so, how close are firms to enforcement constraint when it isn't binding?

Comments on the model

- Multiple equilibria are based on expectation that when borrowing constraint binds, collateral $\bar{k}$ can only be sold to users ("households") with less productive use ($\underline{\xi}$) of the collateral than firms ($\bar{\xi}$).

- But enforcement constraint ensures that there is no default in equilibrium. If no transfer of $\bar{k}$ from firms to households takes place, how can $\underline{\xi}$ be an equilibrium?

Fundamentals or multiple equilibria? Policy implications

▶ *Modeling the shocks as endogenous processes has also important policy implications. It suggests that changes in the structural features of the economy, such as financial integration or the public provision of liquidity, can change the volatility and international correlation of shocks, which usually are taken as exogenous.*

▶ Economic fluctuations in response to changes in fundamentals are (in this model) efficient, those due to switches between equilibria inefficient.

▶ This paper's focus on multiple equilibria seems highly relevant in the wake of the crisis.

▶ How to distinguish fundamentals-driven from endogenous fluctuations?

Fundamentals or multiple equilibria? Policy implications

- ▶ Example: Bank runs.

- ▶ Diamond-Dybvig: Bank run equilibria are inefficient. Calomiris-Kahn: Threat of runs as disciplining device.

- ▶ Opposite policy implications. D-D: Deposit insurance to rule out run equilibrium. C-K: Existence of run equilibrium provides incentive for (some) depositors to monitor the banker.

- ▶ Fundamentals as determinants whether multiple equilibria exist? Rochet-Vives.

- ▶ What are the implications of P-Q for stabilization policy?

- ▶ Key implication: In integrated capital markets, changes in asset prices due to switches from one to another equilibrium are perfectly correlated across countries.

- ▶ The failure of Lehman Brothers is widely viewed as an internationally synchronized equilibrium switch.

- ▶ How important are multiple equilibria in explaining movements in euro area sovereign yield spreads?

- ▶ Fundamentals-based changes in spreads might be less highly correlated across countries than mulitple-equilibria-based changes.

10-year sovereign spreads since 2006

Link to common components literature
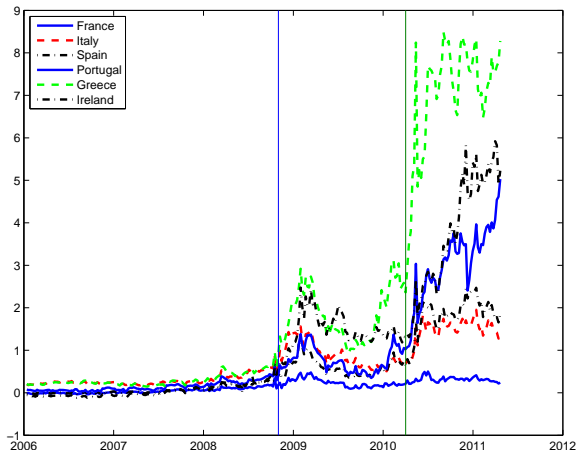
▶ Many studies have found high explanatory power of first principal component of spreads.

▶ First PC seems to correlate with proxies for risk aversion such as U.S. Aaa spread.

▶ True for sample as a whole, but masks considerable time variation.

▶ Here use daily data 1999 to 5/20/2012 of spreads of most actively traded 10-year (or close to) government bond of GR, PT, ES, BE, NL, AT, FI, IE, IT, FR over comparable German bund.
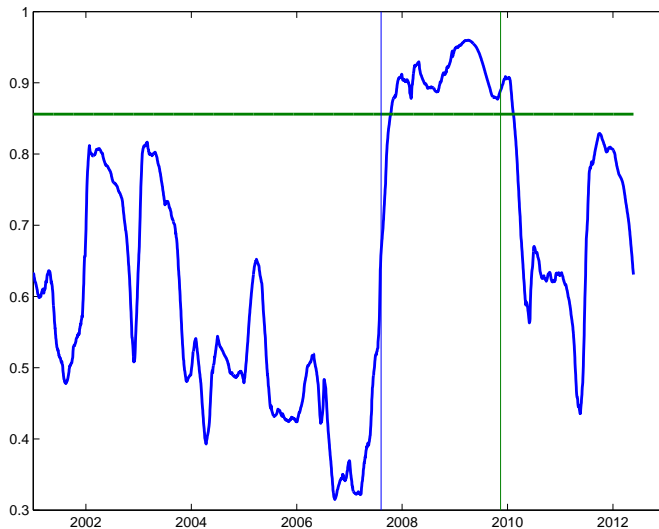
Interpreting common components findings

- ▶ Think of spread as product of price and amount of risk.

- ▶ Spreads moved closely with Aaa spread from 1/2007 to 2/2008, from 3/2008 to 11/2009 (but with much larger loadings), but not since then.

- ▶ Suggests during early stages changes in *common* risk prices were dominant, since November 2009 changes in *country-specific* risk amounts.

- ▶ Is time variation in risk aversion an alternative/ additional mechanism for generating multiple equilibria?

Conclusions

- ▶ Paper emphasizes the potential importance of self-fulfilling expectations in economic fluctuations.

- ▶ Highlights importance of credit as source of multiple equilibria, financial linkages as transmission mechanism.

- ▶ More work is needed to assess the empirical relevance of fundamentals vs. beliefs as sources of fluctuations, effects of fundamentals on existence of multiple equilibria.

- ▶ Implications for stabilization policy could be very different.