Risk, Volatility, and the Global Cross-Section of Growth Rates

by Craig Burnside and Alexandra Tabova

Discussion by David Backus
NBER EFG Meeting | NY Fed | October 23, 2009
Outline

Section 1 (Ramey-Ramey)
  - low growth associated with high volatility

Section 2 (factor model)
  - factors account for \( \sim 30\% \) of time series variation in growth rates
    (US growth, financial conditions, commodity prices)
  - low growth associated with high factor volatility

Section 3 (sources of growth)
  - mean growth connected to factor sensitivities
    (positive sensitivity to commodity prices bad, to US short rate good)

Sections 4-5 (growth rates as returns)
  - low growth associated with high risk (factors = sources of risk)
  - so: capital flows away from risky countries
Why?

Why are volatility and growth related?

Why are business cycles related?

Why are asset returns related?

Why doesn’t capital flow to poor countries?
Why are volatility and growth related?

Suggestion: volatility reflects sensitivity to factors

Highest-volatility countries
- Liberia: civil war, GDP dropped 70% in 1990
- Rwanda: genocide in 1994, GDP dropped 50%
- Solomon Islands: ethnic violence
- Guinea-Bissau: civil war, coup
- Chad, Gabon, and Saudi Arabia: oil

Bottom line
- Positive sensitivity to commodity prices $\Leftrightarrow$ low growth
- Why? Do natural resources lead to bad institutions, even war?
Why are business cycles related?

Suggestion: exposure to common shocks (the factors)

What we (think we) know

- Commodity prices (oil)
- Imports and exports
- **Global financial conditions**

Bottom line

- Global financial conditions paramount
- Why isn’t this more evident in the factor model?
Why are asset returns related?

Fact: asset returns more highly correlated than growth rates

Think about why stock prices might be correlated

- Current cash flows
- Future cash flows
- **Common pricing operator**

Bottom line

- Variation in price of risk as well as risk itself
- Should we add a “risk factor”? 
Why doesn’t capital flow to poor countries?

Suggestion

*Countries with low growth tend to be more heavily exposed to global risk. [If we have measured risk correctly], we can explain, at least partially, why more capital does not flow to these countries.*

Standard explanations

- Enforcement of international claims
- Private information, institutions

Open question

- Would complementary evidence on returns help us decide?
Reading list

Resource curse
- Sala-i-Martin and Subramanian (NBER 9804, 2003)

Business cycles
- Backus and Gali (ask us)
- Bernanke (speech, October 19, 2009)

Asset returns
- Brandt, Cochrane, and Santa-Clara (JME, 2006)
- Dumas, Harvey, and Ruiz (JIMF, 2003)
- Neumeyer and Perri (JME, 2005)

Capital flows
- Bai and Zhang (ms, 2009)
- Kose, Prasad, Rogoff, and Wei (IMF, 2006)