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**Discussion of „Financial Innovations and
Macroeconomic Volatility“
by Vincenzo Quadrini and Urban Jermann**

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“Financial Innovations and Macroeconomic Volatility”

by Urban Jermann and Vincenzo Quadrini



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Overview

- Paper jointly explains decline of output volatility and increase in financial volatility in the early 1980s
- Source: Financial innovations and deregulation reduced firms' financing costs
- Paper establishes new direction of research into the Great Moderation

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The Great Moderation

- Collection of stylized facts that describe a sudden decline in the volatility of macroeconomic time series, especially output and inflation

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 - Accident: decline in the incidence and volatility of exogenous shocks
 - Design: improved, more anti-inflationary monetary policy

The Model

- Standard RBC model with heterogeneous firms in which financial structure matters
- Firms raise funds by issuing debt and equity:
 - debt issuance is subject to costly state verification, imposes enforcement constraint
 - equity issuance, defined as issuing and repurchasing shares as well as paying dividends, is subject to adjustment costs

The Model (contd.)

- ❑ Transmission mechanism: requirement to raise funds to finance working capital
- ❑ When firms issue debt, their value is reduced
- ❑ Enforcement constraint mandates adjustment of production inputs
- ❑ Avoided by issuing equity
- ❑ Smoothness of inputs, thus output, achieved by variation of finance margins

The Model (contd.)

- Decrease in financing costs allows:
 - Easier substitution into equity
 - Relaxation of borrowing constraint (*ceteris paribus*)
- Paper compares two economies that differ in terms of financing costs:
 - Lower cost economy is less 'distorted' on the finance side
 - Less feedback of firm finance to production

A Finding and Two Caveats

- Surprising result:
 - reduction in cost of debt financing irrelevant for the decrease in aggregate volatility
 - firms operate at enforcement margin already
 - Small changes in enforcement costs do not translate into large differences in the relative volatility of firm value and production

A Finding and Two Caveats

□ Caveat #1:

- Results only obtain when exogenous shock to the profitability of firms
- aggregate volatility counterfactually increases when the economy's driving process is technology

A Finding and Two Caveats

□ Caveat #2:

- Baseline calibration assumes big increasing returns to scale in production
- Designed to match behavior of measured TFP
- Implausible, not relevant for the main message, and doesn't affect the results

Some Comments

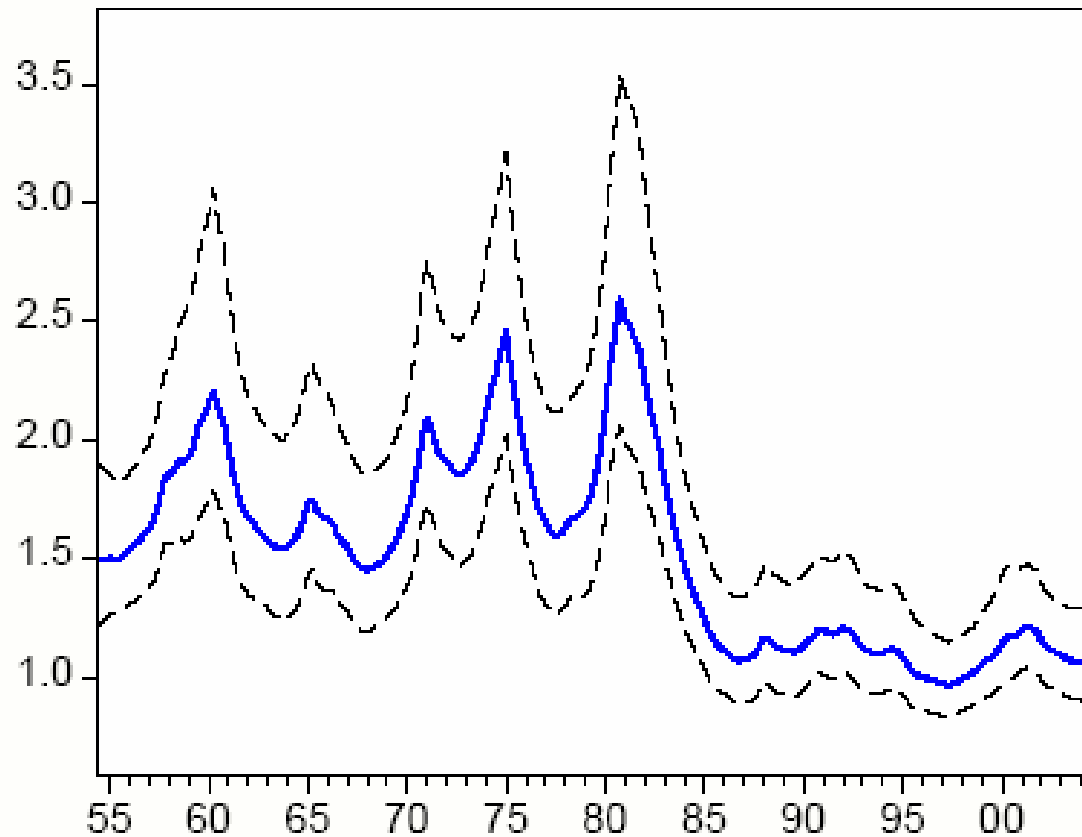
- ▣ Observed decrease in aggregate volatility is sudden and abrupt
- ▣ There are others facets to the Great Moderation

Financial Innovation

- Decrease in output growth volatility is sudden and abrupt
- Story in the paper rests on ability to identify sudden (cataclysmic?) change in the structure of financial markets

Volatility of Output Growth

(Justiniano and Primiceri, 2006)



Financial Innovation (contd.)

- Authors suggest a few developments in U.S. financial markets in early 1980s as examples of decline in financing costs:
 - securitization and the creation of asset backed securities
 - creation of junk bond markets
 - weaker requirements for share repurchases and equity offerings

The Monetary Control Act

- Monetary Control Act of March 1980 deregulated and liberalized the banking system in the U.S.
 - most notably, abolished interest rate ceilings on banks' savings deposits (i.e. Regulation Q)
 - led to large expansion of credit volume
 - prime example of a 'financial innovation' in the banking sector

The Monetary Control Act (contd.)

- However, closer inspection shows that change did not happen overnight (Gilbert, 1986):
 - commercial banks started pressuring Congress in 1976 to abolish Regulation Q in light of rising interest rates
 - money market mutual funds started operating in earnest in 1977, assets increased tenfold between 1977 and 1982, then flattening out
 - changes slowly phased in until 1986

Financial Innovation?

- Regulatory environment is affected by aggregate economic conditions, i.e. high, volatile, and persistent inflation
 - financial innovation is a *consequence* of the Great Inflation and Moderation
- Paper demonstrates link, but not causality
 - no convincing argument that developments occur at precisely the same time
 - does not identify the tipping point
 - adoption of innovation is slow and gradual (Jeremy Greenwood's work)

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- The Volcker Disinflation! (Clarida, Gali, Gertler, 2000, Lubik and Schorfheide, 2004)

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The Great Moderation (recap.)

- The Great Moderation has more aspects than just the decline in aggregate volatility:
 - change in persistence of various macroeconomic variables, esp. inflation
 - suggests that the propagation mechanism has changed
 - paper talks about this, but then doesn't report any statistics

Persistence

	Early Period		Late Period		Late/Early	
	<i>Data</i>	Model	<i>Data</i>	Model	<i>Data</i>	Model
Output	0.72		0.92		1.28	
Net Worth	0.76		0.93		1.22	
Debt	0.39		0.55		1.41	
Equity	0.39		0.26		0.67	

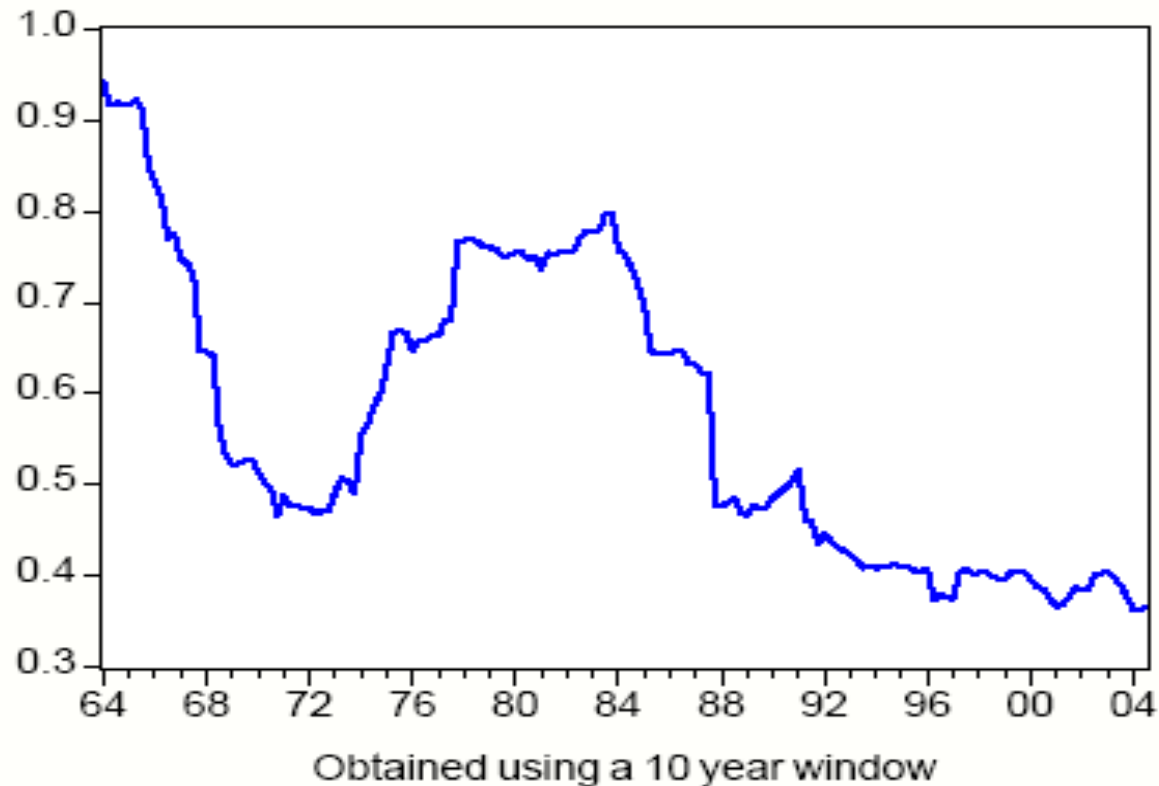
Notes: Table reports first-order autocorrelation coefficients. Data are detrended with the HP-filter.

The Great Moderation (recap.)

- The 'good policy' view of the Great Moderation suggests that it shouldn't be analyzed in isolation
- Can a lack of financial innovation explain the 1970s?

Justiniano-Primiceri: Investment-Specific Shocks

Figure 8: Time Varying Volatility Relative Price of Investment to Consumption



The Great Inflationary Period

	Early Period (1952-71)		Mid Period (1972-83)		Late Period (1984-05)	
	<i>Data</i>	Model	<i>Data</i>	Model	<i>Data</i>	Model
Output	1.98		1.92		1.17	
Net Worth	0.82		1.82		2.61	
Debt	0.88		1.70		1.66	
Equity	0.62		1.05		1.34	

Notes: Table reports standard deviations. Data are detrended with the HP-filter.

Summary

- Important contribution to the Great Moderation debate
- Paper identifies new stylized facts on volatility changes
- Explanation of sources of Great Moderation not fully convincing
- Future research: combine modeling framework with, say, New Keynesian monetary policy model

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