Discussion of Session I: Non-bank financial institutions and systemic risk

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Common theme: financial inter-linkages

- Session's focus: the inter-linkages in the financial sector that transmit shocks

The three papers:

- Model structures in the financial sector that lead to interdependencies and (potential) transmission of strain
- Characterise the strength of these links
- Give some hints about possible policy actions

Common theme: financial inter-linkages

- Inter-linkages between papers are tentative…

I. Castiglionesi: Inter-bank linkages/exposures

II. Chakravorty: Investor incentives and contagion unrelated to fundamentals

III. Getmansky: Hedge fund behaviour and potential systemic risk

- My plan: High-brow overview (reverse order), highlight main messages draw the “bottom line” from policy perspective

I. Inter-bank linkages

- Liquidity risk and moral hazard leading to (cross-border) bank failures
- Basic model:

Diamond-Dybvig & Moral Hazard & Two countries

Investments:
short - long

Consumers:
Patient - impatient

“Gambling” investment
option for banks
(from Allen-Gale)

Uncertainty at country
level,
dealt by inter-bank
claims

I. Inter-bank linkages

- Not always an easy model to follow:
  - Many variants and “moving parts”
  - Reconsider exposition and discussion of intuition

- Essential points:
  - Risk neutral bankers provide insurance to risk averse consumers…
  - …but may be tempted to “gamble”
  - Cross-country co-insurance can deal with aggregate uncertainty

I. Inter-bank linkages: main results

- More capital is better than less
  - Helps counterbalance moral hazard
- … up to a point
  - Zero marginal contribution beyond a threshold
  - Gambling can be desirable (if risk is sufficiently low)

- This is a more general point in Allen-Gale models
  - Fragility can be value enhancing when financial system manages rather than avoids risk
  - Implies that capital requirements have a “cost”

Inter-linkages = Contagion?

- Not really.
- There are no runs on otherwise healthy banks
- These are common exposures of banks from the two countries. Perfectly rational and anticipated (in expectation)

I. Inter-bank linkages: overall comments

- I like the model's potential
- It needs some more work
  - Asymmetric situations
  - Correlated gambling outcomes
  - Cross-border deposits?
- Interesting ideas that can use some further attention

II. Incentives and contagion

- Asset prices can deviate from fundamentals because of interactions of market participants
- Behaviour shaped by:
  - Compensation/incentive schemes
  - Institutional restrictions to investment
- Contagion from one market to the next because of common investor base

II. Incentives and contagion

- Two types of investor , three risky asset classes
  (plus risk-free cash)

	Asset A	Asset B	Treasuries	Can short?	Incentive
Dedicated	☑	☑			Benchmark
Opportunistic	☑	☑	☑	☑	Absolute

II. Incentives and contagion

- No uncertainty as to long-term value of assets
- Asset prices equate demand and net supply in middle period
  - supply net of local demand (“noise”)
  - the only source of uncertainty in the model
  - uncorrelated supply shocks across assets

II. Incentives and contagion

- Investors are paid to exploit predictable supply movements
- Incentive schemes imply mean-variance optimisation
- Heterogeneity:
  - different mean and variance because of benchmark
  - different investment universe
  - Leverage: ability to go short

II. Incentives and contagion: results

- Mean-variance optimisation → demand driven by "Sharpe ratio"
- Demand of otherwise uncorrelated assets is linked through incentive schemes
- Greater risk and/or risk aversion lead to "index hugging"

II. Incentives and contagion

- Shocks (net supply) from one market transmitted to another as investors rebalance portfolios

- Short-termism because of incentive scheme and attempt to take advantage of predictable shocks

- Contagion not always driven by same group of investors

II. Incentives and contagion: comments

- Many things are unclear:
  - Where do predictions of net supply realisations come from?
  - Why are there no long-term investors?
  - Not sure that price shocks have any economic impact

- No relevant policy lessons

III. Hedge funds

- Paper does <u>many</u> things:
- Primer on hedge funds
- Discussion of hedge fund **illiquidity**
- Discussion of patterns of **attrition** (liquidation)
- Discussion of **systemic risks** linked to hedge funds
  - Common drivers of returns
  - Regime switching
  - Links to banking sector

III. Hedge funds: liquidity

- Illiquidity = serial correlation of returns
- Hedge fund returns are significantly autocorrelated so their portfolios should be illiquid
- There many measurement and "behavioural" explanations for serial correlation besides illiquidity (especially at monthly frequency!)

III. Hedge funds: liquidity

- Measures calculated on indices are problematic
  - Serial autocorrelation means illiquidity
  - Illiquidity is the same across funds
- Aggregate indicator more interesting, but it is coincident or lagging **not** a **leading** one
  - What is the persistence of liquidity index?
  - Can we predict spikes?

III. Hedge funds: Attrition

- Hedge funds tend to have short lifespan
- Attrition rates:
  - vary across styles
  - are negatively related to age, performance, size, and inflows
- Questions:
  - no risk as an explanatory variable?
  - Relative vs absolute performance
  - Shifting horizon of regressions

III. Hedge funds: systemic risk

- Style analysis (correlation of returns with market factors):
  - Non-linear relationships
  - Commonality in exposures
- Questions:
  - Why not a panel analysis of individual funds?
  - Comparison with low (unconditional) correlation across styles?
  - Use of derivatives factors?

III. Hedge funds: systemic risk

- Regime switching in return patterns:
  - High/Low returns periods
  - Persistence in regime
- Questions:
  - What is the cross-styles correlation of regimes?
  - Joint estimation across styles/funds?
  - Why not calculate a VaR for each fund and aggregate?

III. Hedge funds: systemic risk

- Links with banks:
  - Correlation between bank equity and hedge fund returns
- Questions:
  - No interest rates on the right hand side!
  - Marginal explanatory power rather low?
  - Granger causality?
  - Causality?
    - look at prime brokers' return
    - large/small bank result unintuitive

III. Hedge funds: systemic risk

- Jumping the gun!
- Lots of interesting leads no convincing story
- Need for greater focus

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