

Comments on Greenwood, Landier and Thesmar:

Vulnerable Banks

by

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Motivation:

- transmission of shocks to asset prices
 - direct effects (vulnerability to shocks)
 - indirect effects (vulnerability to asset sales by others)
 - systemic effect (contagion via fire sales)

- simple (operational) measures of
 - vulnerability
 - systemicness

➤ policy experiments

- which are the systemically important banks?
- vulnerability ranking?
- how to structure capital equity injections?
- merger policies (in case of distress)?
- limit size?
- limit leverage?

Basic assumptions:

- linear asset returns

behavioural assumptions

- fixed leverage (i.e. no equity issuance)
- fixed portfolio weights
- fixed price impact

in order to maintain linearity

Results: plenty and plausible

- determinants of contagion
 - direct exposure
 - leverage
 - connectedness
 - distribution of liquid assets
- capital reduces fragility
- optimal distribution of capital (injections) according to systemic impact
- empirical identification of SIFI's
- empirical policy advise
- ...

Any caveats?

1. fixed leverage
2. endogenous liquidity and non-linear returns
3. compensating balances and non-linear returns
4. derivatives and non-linear asset returns

1. Fixed Leverage

- variations across time and space

	D	J	UK	US
cost of bank equity (80-88)	6.9	3.0	9.9	11.9
industry	9.8	6.7	10.6	10.5
core capital (Basel I) (88)	10%	11.5%	10%	7%

Quelle: Zimmer, McCauley, FRBNY, 1991

- large cost-advantage for well capitalized banks (Ö. Dursun, 2013)
 - positive externality of capital is undervalued

2. Endogenous Asset Choice

- Sell assets according to liquidity
 - sale volumes are increasing as assets become less liquid
 - accelerating spiral: few sales initially and increasing volume
 - non-linear reaction
 - initially *overestimation* of true effect
 - ultimately *underestimation* at the height of crisis

3. Compensating balances and non-linear returns

Deutsche Bank, 31.12.2008

<u>Assets</u> (bill. €)		<u>Liabilities</u> (bill. €)	
reserves	19	equity	32
loans – short		deposits – short	396
loans – long	269	deposits - long	134
<i>interbank loans</i>	64	<i>interbank deposits</i>	87
<i>structured investments</i>	1624	<i>structured liabilities</i>	1334

- Compensating balances act like buffers initially
- They are sizable (twice equity)
 - model **overestimates** impact initially
 - once fire sales kick in, model **underestimates** true impact

4. Derivatives and non-linear asset returns

- Payoff structure of derivatives will affect vulnerability as well as systemicness
 - Fire-sales of the underlying may generate extra returns on the derivatives portfolio.
 - Is the *individual bank* net-buyer or net-seller of insurance?
 - Is the *banking sector at large* net-buyer or net-seller to the non-bank sector?
 - Non-linearities: How is the asset portfolio hedged?

Conclusion:

- Important step for understanding fire-sale propagation mechanism
- Straightforward implementation to real data possible!
- Simple structure imposes strong linearity assumptions
- Need to check for *non-linearities* before a taking the model to advise policy
- Critically need to adjust for *bank objectives* and a *strategic role* for bank capital.

In short:

Pleasure to read - highly recommendable!