ANTON KORINEK, MARTIN NOWAK
RISK-TAKING DYNAMICS AND FINANCIAL STABILITY

Discussion by **Jaroslav Borovička**

April 2016

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- How does heterogeneity in the economy (in financial markets) affect
  - short-run dynamics
  - long-run outcomes

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Questions

- How different is this from the existing literature?
- Is this the right economic mechanism?

Bankers with heterogenous types i and initial stock of financial assets k_0^i ('capital' stock).

- Each type access to a set of investment technologies with exogenous returns.
- Maximizing the objective

$$E\left[U\left(k_T^i\right)\right] = E\left[\ln\left(k_T^i\right)\right]$$

  leads to the well-known Kelly (1956) rule allocation.
- Each banker lives in complete autarky.

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  - Either let the banks trade capital, or let bank owners trade capital shares in banks.

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There is no other friction in the model $\implies$ problem solved.

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   - Reallocation of capital to more risky types after a good shock is an outcome of efficient risk sharing.capital reallocations

Authors are quite ambiguous. E.g., they give the following interpretations of 'capital reallocations'

- random changes in technologies
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... but it becomes important when considering policies.

WHERE DOES THE EXISTING LITERATURE STAND?

Equilibrium effects arising from reallocation of wealth

- Dumas (1989), Basak, Cuoco (1998), Bhamra, Uppal (2009), Blume, Easley (1992 etc.), Cogley, Sargent (2008, etc.), David (2008), Epstein, Miao (2003), Kan (1995), Zapatero (1998), Anderson (2005), Borovička (2015), Bhandari (2015), Backus, Routledge, Zin (2008), Chan, Kogan (2002), Chen, Joslin, Tran (2010), Detemple, Murthy (1994) ...

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Heterogeneity in the banking sector

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Computational tools

- Mertens, Judd (2013), Judd, Maliar, Maliar (2011 etc.), Kaplan, Moll (2016), Kaplan, Moll, Violante (2015), ...

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- Is this mechanism strong enough?
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- Is the autarky assumption reasonable to capture key effects?
  - No.
  - The key variation is in leverage.

LEVERAGE AND ASSET GROWTH IN THE MODEL

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- But how does the data look like?

Household sector: Consistent with the model — asset growth and leverage negatively correlated.

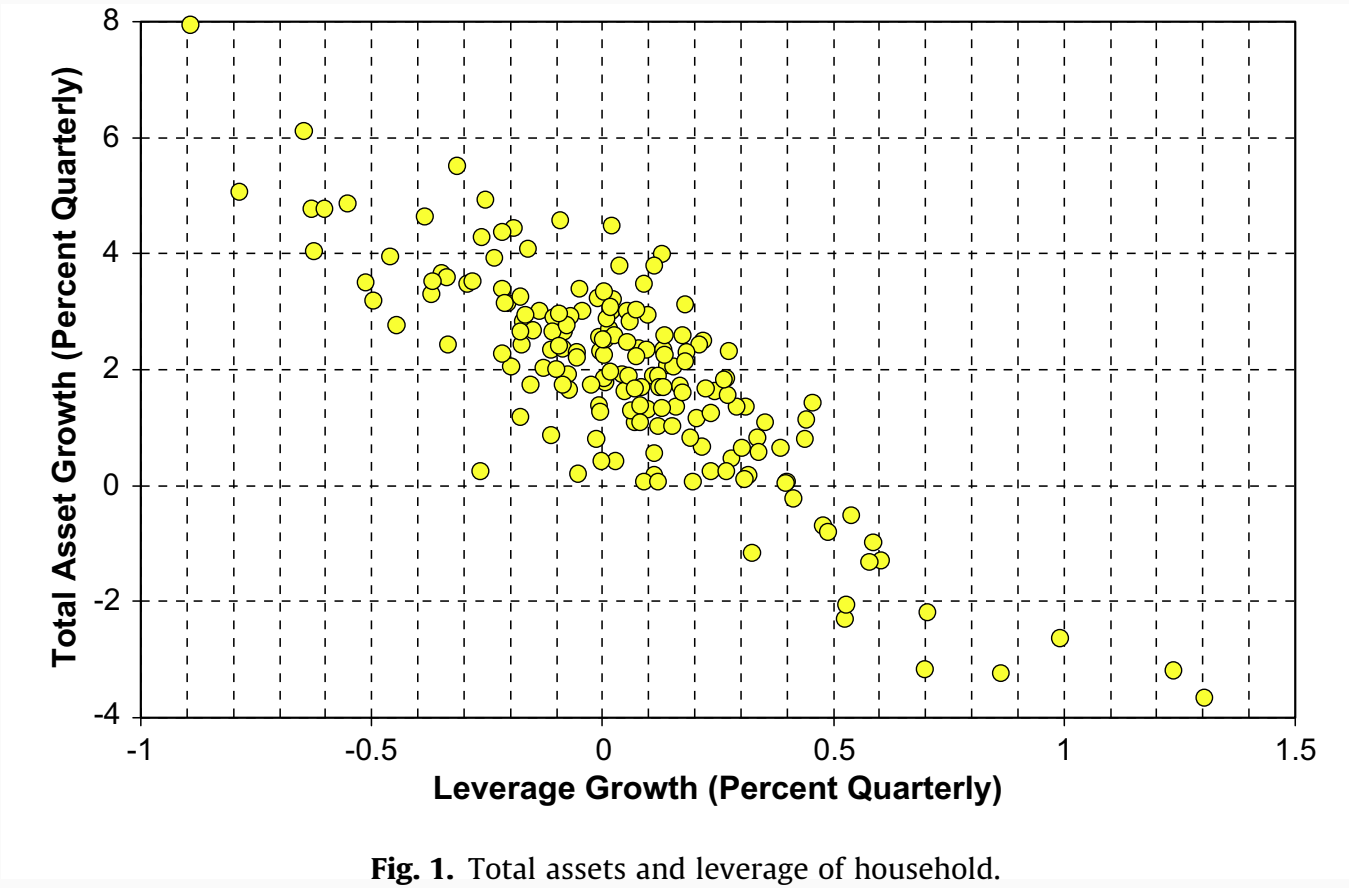

Fig. 1. Total assets and leverage of household.

Non-financial firms: No relationship.

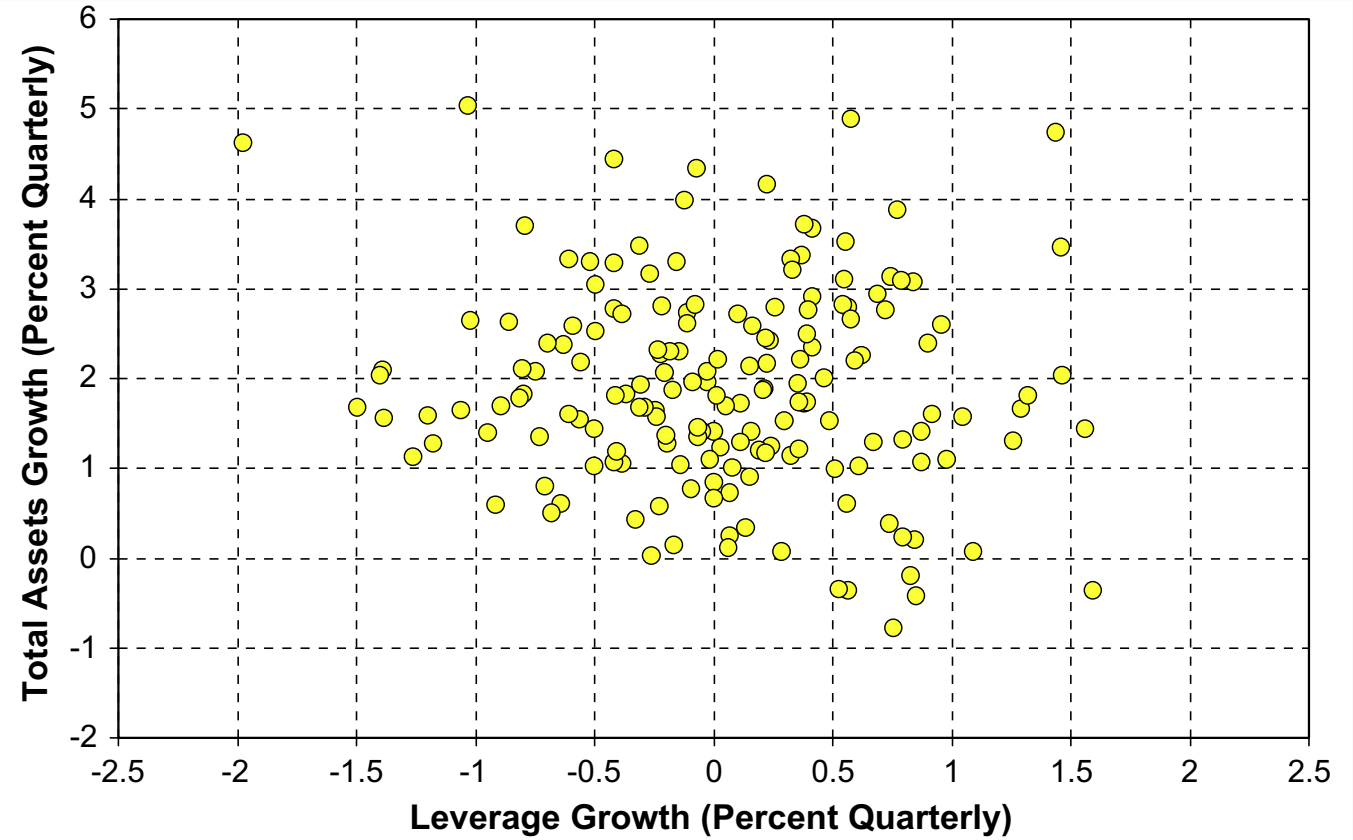

Fig. 2. Total assets and leverage of non-financial, non-farm corporates.

Commercial banks: Riskiness completely driven by leverage.

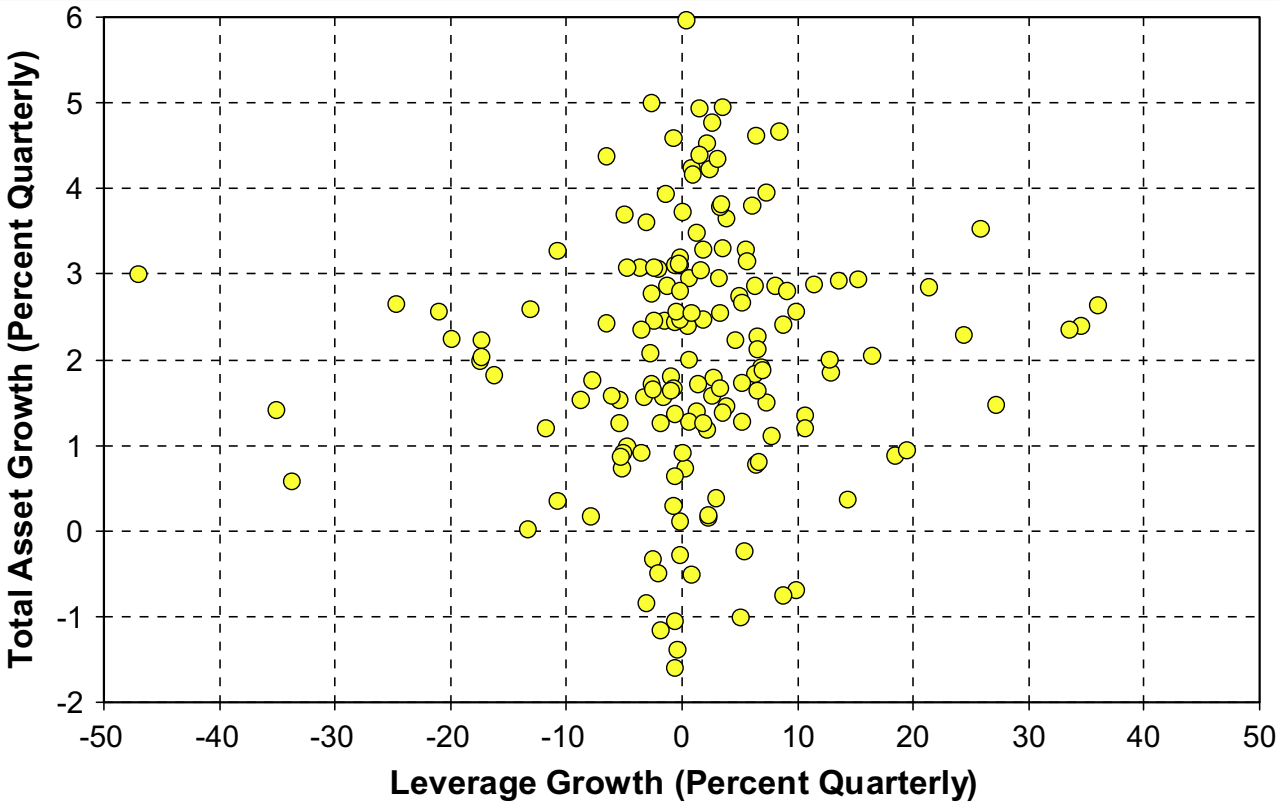

Fig. 3. Total assets and leverage of commercial banks.

Brokers and dealers: Asset growth and riskiness completely driven by leverage.

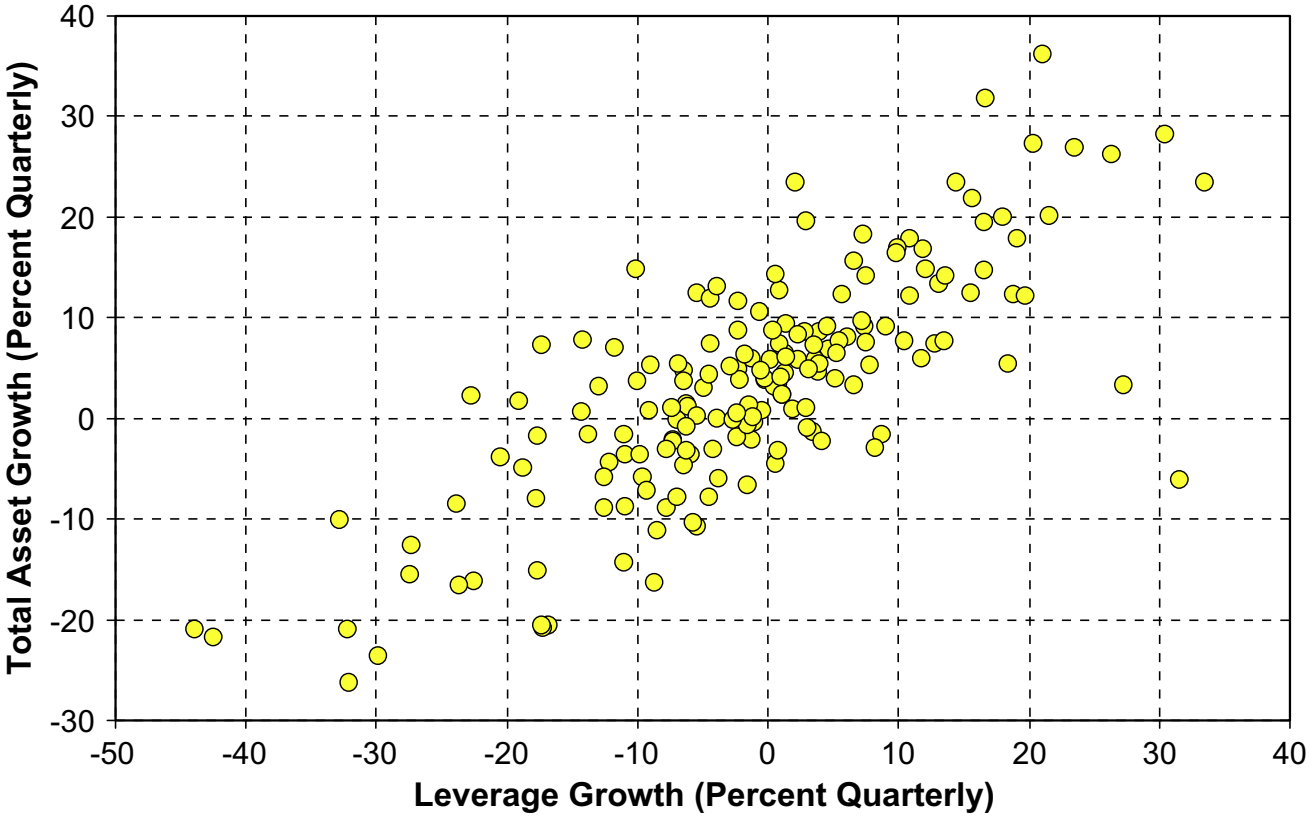

Fig. 4. Total assets and leverage of security brokers and dealers.

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This is unfortunately a bit of a moving target in the paper (and also between versions).

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- But policies evaluated based on reduction in volatility.

EXAMPLE: BAILOUT EXPERIMENT

Extension with bankers and workers.

- Workers are exogenously restricted to be hand to mouth.
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But why bailout?

- Notice that the main friction is autarky.
- But if the government is able to undo autarky through bailouts, why not provide workers with equity shares in the banks?
- This is what a market for bank capital would do! (There is no other friction that would prevent it.)

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- use it!