Discussion: Systemic analysis: A method to show how funds flow through financial systems

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Overview

- The paper introduces a framework to analyze flow of funds through the financial system.
- The system satisfy accounting conditions:
  - $L^t_{fec} = A^t_{fec}$ (assets = liabilities)
  - Complete balance sheet identity: $N^t_e + \sum_{i=1}^{I}(A^t_i + V^t_i) = \sum_{j=1}^{J} L^t_j + S^t_e$
- The flow of funds (ΔA_d) can be disentangled into:
  - $\underbrace{\frac{A^d_t}{T^t_e}\left(\sum_{j\in P}\Delta_s L_j + \Delta_s S_e\right)}_{\text{Growth factors}} + \underbrace{\frac{1}{T^t_e}\sum_{i\in P}(A^t_i \Delta A_d - A^t_d \Delta A_i)}_{\text{Realocation factors}} + \frac{A^t_d}{T^t_e}\Delta R_e$

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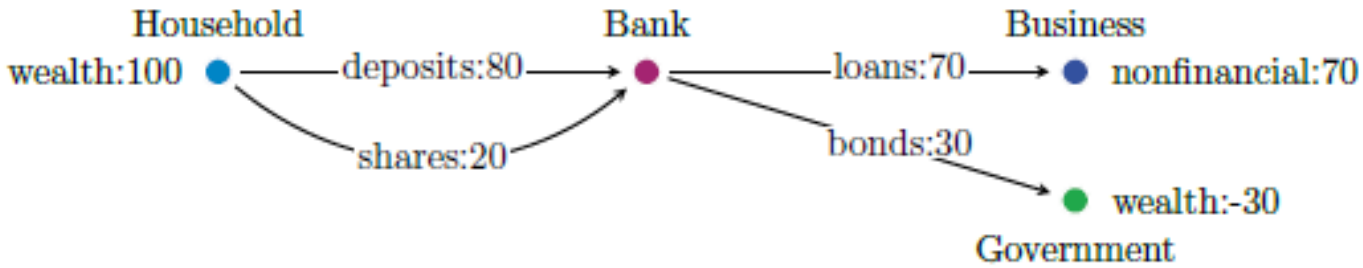
System diagram

Figure 1: Relation between balance sheets, their financial network and aggregate ALM

(a) Entity balance sheets

Household		Bank		Business		Government	
deposits:80	wealth:100	loans:70	deposits:80	nonfinancial assets:70	loans:70		bonds:30
shares:20		bonds:30	shares:20				wealth:-30

(b) Financial network



(c) Aggregate ALM as sum of instrument ALM

	Household	Bank	Business	Government
Household	0	0	0	0
Bank	shares:20+deposits:80	0	0	0
Business	0	loans:70	0	0
Government	0	bonds:30	0	0

My take on the paper

- The framework is **very** general and broadly applicable.
  - Stress testing
  - Policy scenario evaluation
  - Systemic crisis analysis
- Minimal amount of assumptions due to accounting relations.
- Ease of communicating results.

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Suggestions, comments, etc...

- Consider a simple VAR model with time-varying parameters for break point detection (à la Diebold and Yılmaz 2014) in order to have a single model for breaks and eliminate potential spurious breaks. Alternatively, graphical models.
- Regarding "Creating financial systems from national accounts": Consider matrix completion literature applied to interbank markets (e.g. Anand et al. 2018 for benchmark of various methods).
- See the literature for stock-flow consistent modeling (Godley and Lavoie 2006)
- Consider the literature suggesting endogenous money/deposit creation (McLeay, Radia, and Thomas 2014)

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