



BANK FOR INTERNATIONAL SETTLEMENTS

# Networks, Data and Policy

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**Financial Risk and Network Theory**

**Cambridge Centre for Risk Studies - Judge School of Business**

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Cambridge



# Outline

- Setting the stage
  1. Unfair, outrageously short overview of recent literature

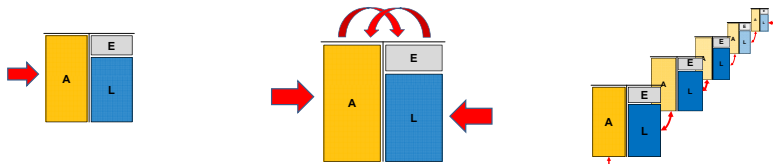
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- Setting the stage
  1. Unfair, outrageously short overview of recent literature
- The road ahead?
  1. What do we need?
  2. Challenges?
  3. What do we have?

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  1. What do we need?
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  3. What do we have?
- Having policy impact
  1. Policy environment
  2. Collaboration
  3. Presentation: Visualisation as an additional tool

# A completely incomplete historical overview

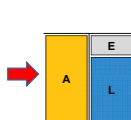


- Focus on *asset side*
- Domino mechanics  
Upper (2011), van Lelyveld and Liedorp (2006)

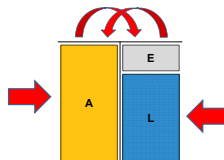
- Supersize: RAMSI  
Aikman et al. (2009)
- Liquidity  
Van den End (2008), Berger and Bouwman (2009)
- Overview Stress Testing  
BCBS (2013a,b)

- Endogenous networks  
Halaj and Kok (2014),  
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- Long intermediation chains  
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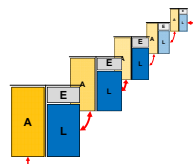
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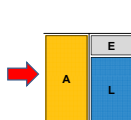


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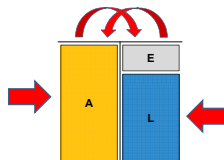


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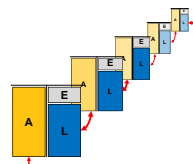
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# What do we need?

## 1. Timely

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2. Granular
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5. Public?

# What are the challenges?

## 1. Costs

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1. Costs
2. (political) drive
3. Technical issues
  - International Securities Identification Number (ISIN)
  - Legal Entity Identifier (LEI)

# Relatively straightforward

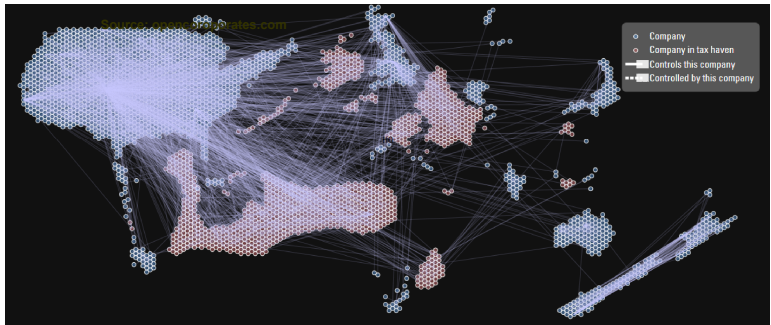
## Bank of America



Source: [Opencorporates.com](https://opencorporates.com)

# Does this make economic sense?

## Goldman Sachs



Source: [Opencorporates.com](https://www.opencorporates.com)

# What do we have

## 1. Depository Trust & Clearing Corporation (DTCC)

- Trade, settlement data

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## 4. Other datasets

- MIFID
- Brazil CB
- International Data Hub
- ...

Cont et al. (2010)

FSB (2014)

# Policy impact

- Policy environment
  - Complicated coordination game

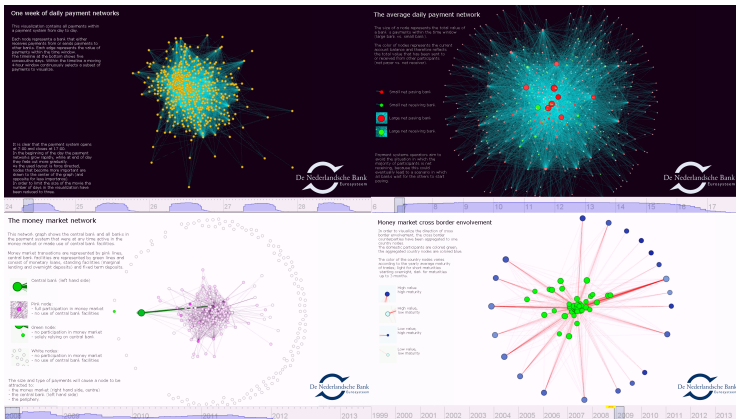
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- Collaborate!
  1. Individual contacts
  2. BCBS Research Task Force
  3. NetGen (<http://www.netgen-toolbox.org/about.html>)

# Policy impact

- Policy environment
  - Complicated coordination game
- Collaborate!
  1. Individual contacts
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  3. NetGen (<http://www.netgen-toolbox.org/about.html>)
- Presentation
  - No math
  - Intuition
  - Visualisation as an additional tool

# Visualisation as an additional tool



Heijmans et al. (2014)

# Thank you for your attention

The usual disclaimer applies: these views are my own and do not represent the views of the BIS or De Nederlandsche Bank.

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