

Interbank Exposures

An Empirical Examination of Systemic Risk in the Belgian Banking System

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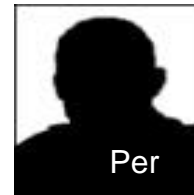
National Bank of Belgium

Discussion by

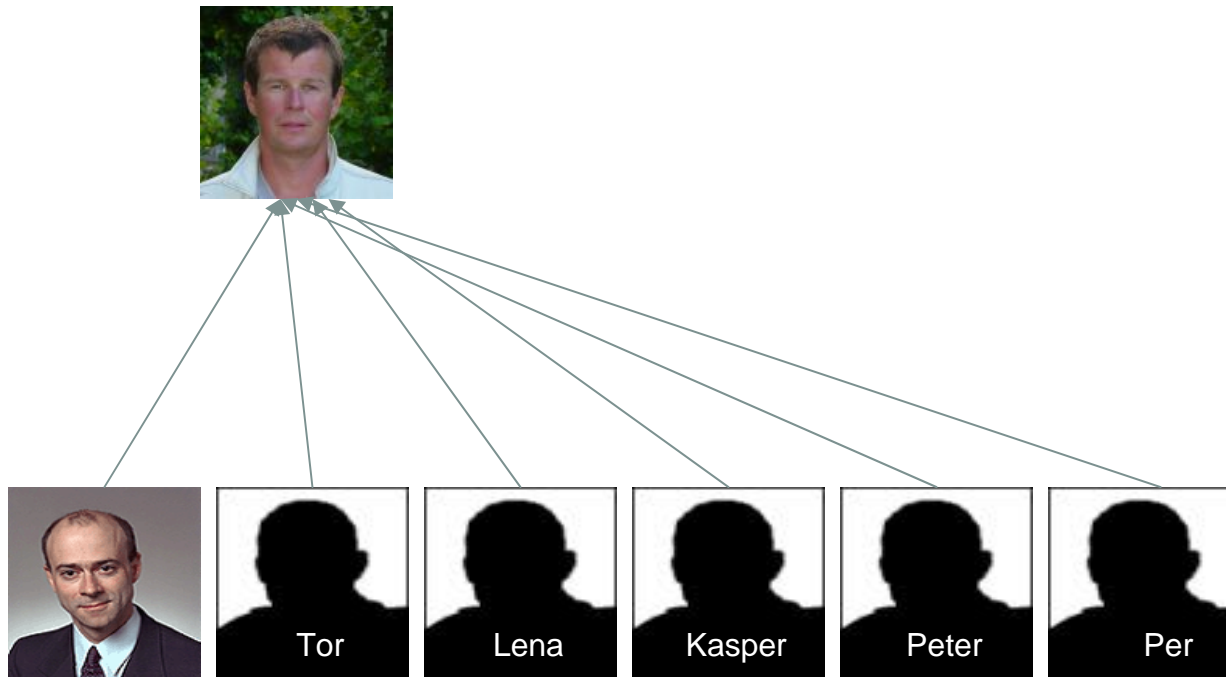
Steven Ongena

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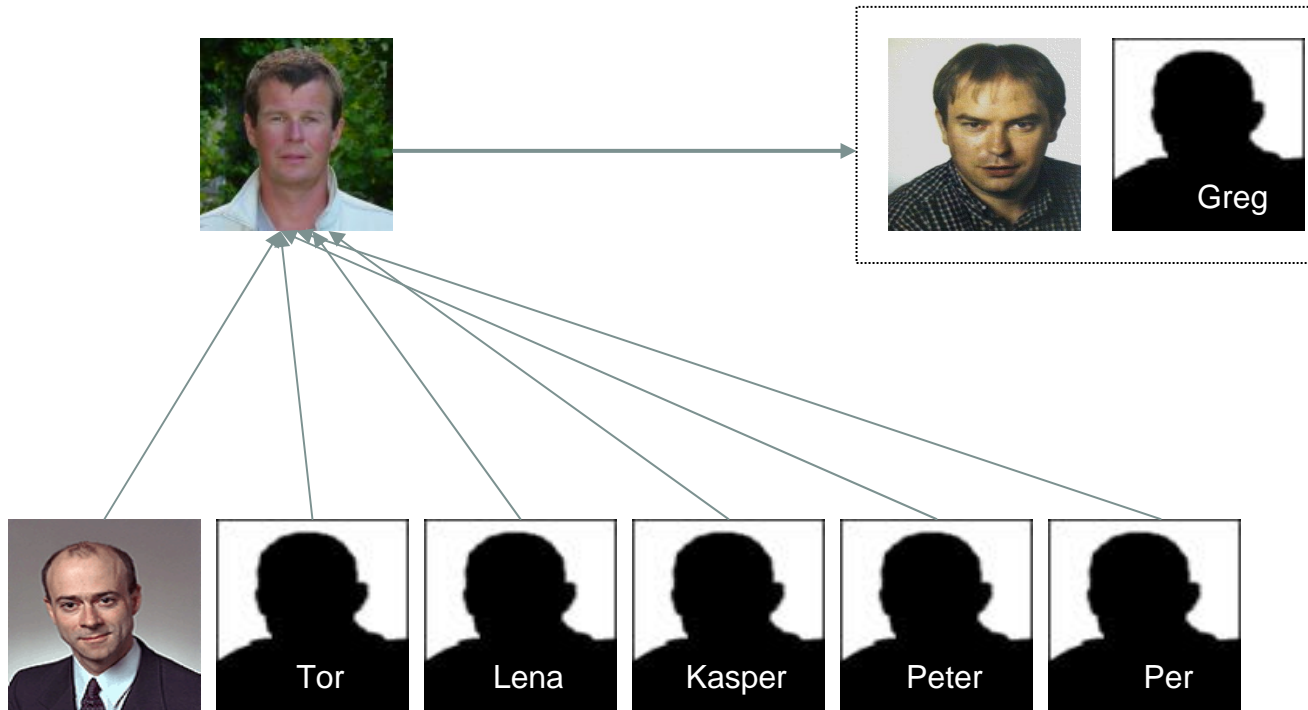
“Inter-Author Exposures”



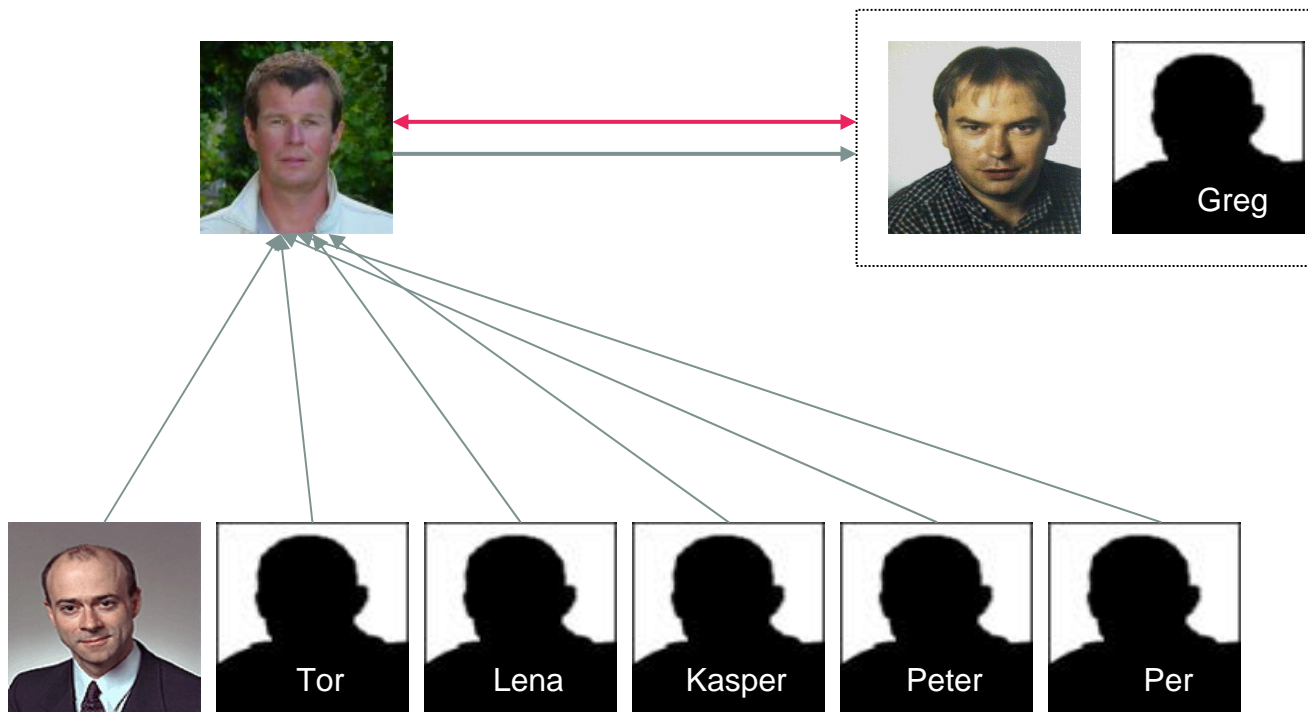
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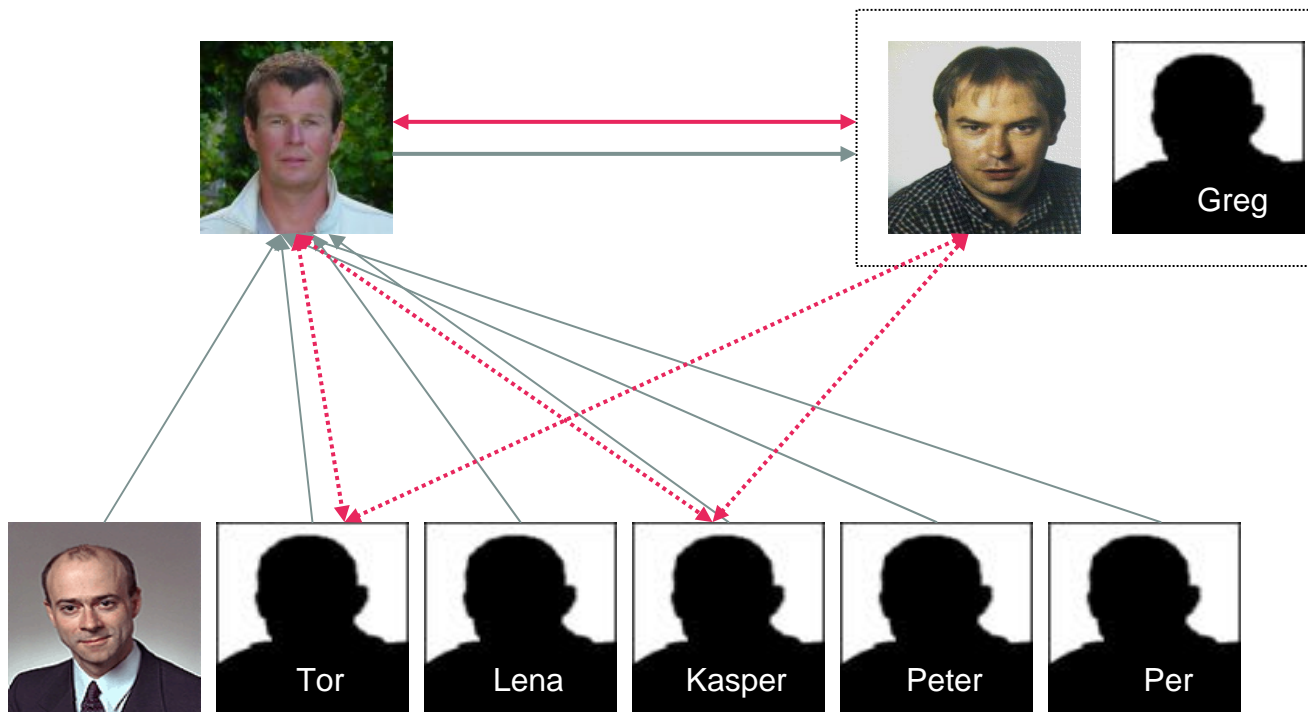
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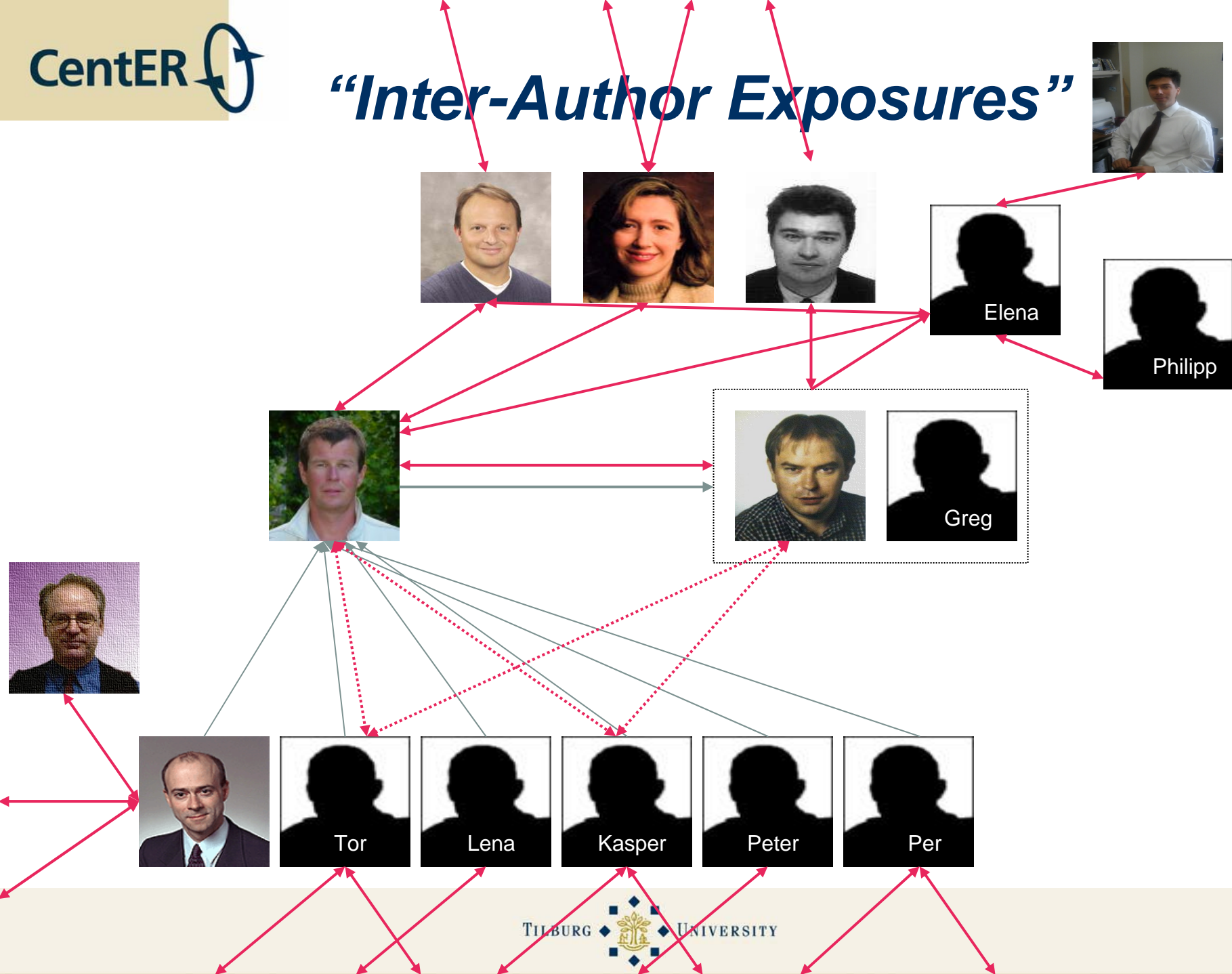
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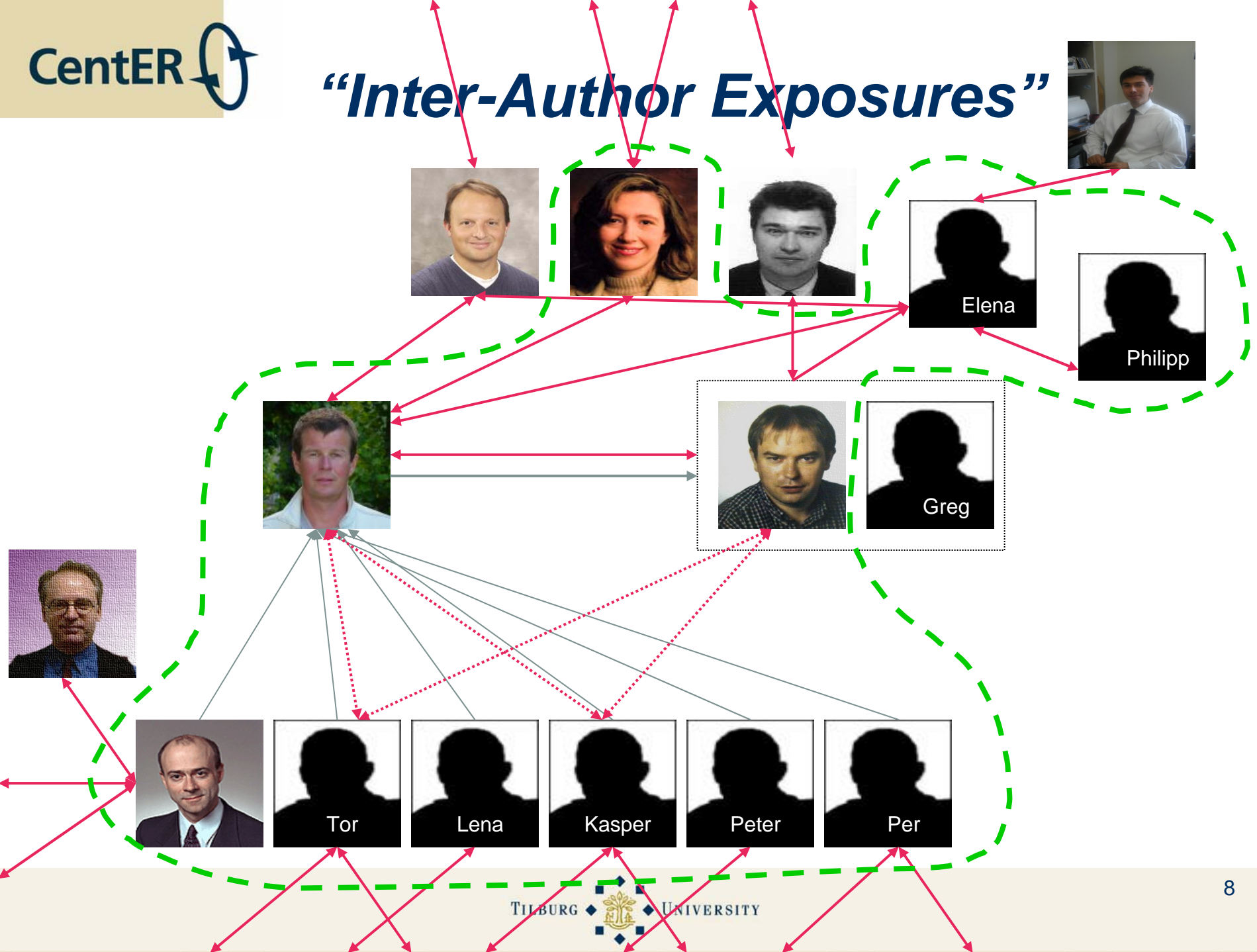
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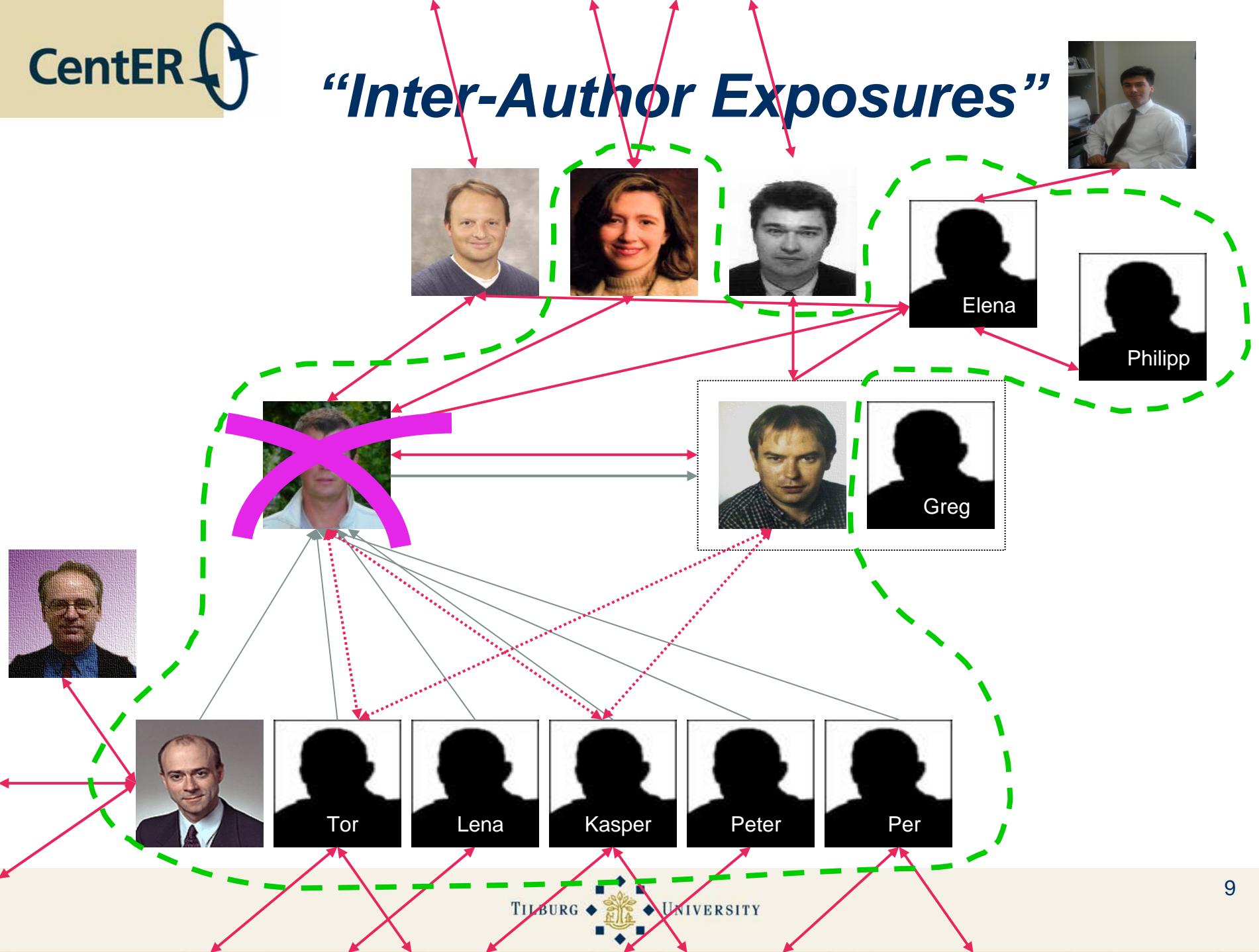
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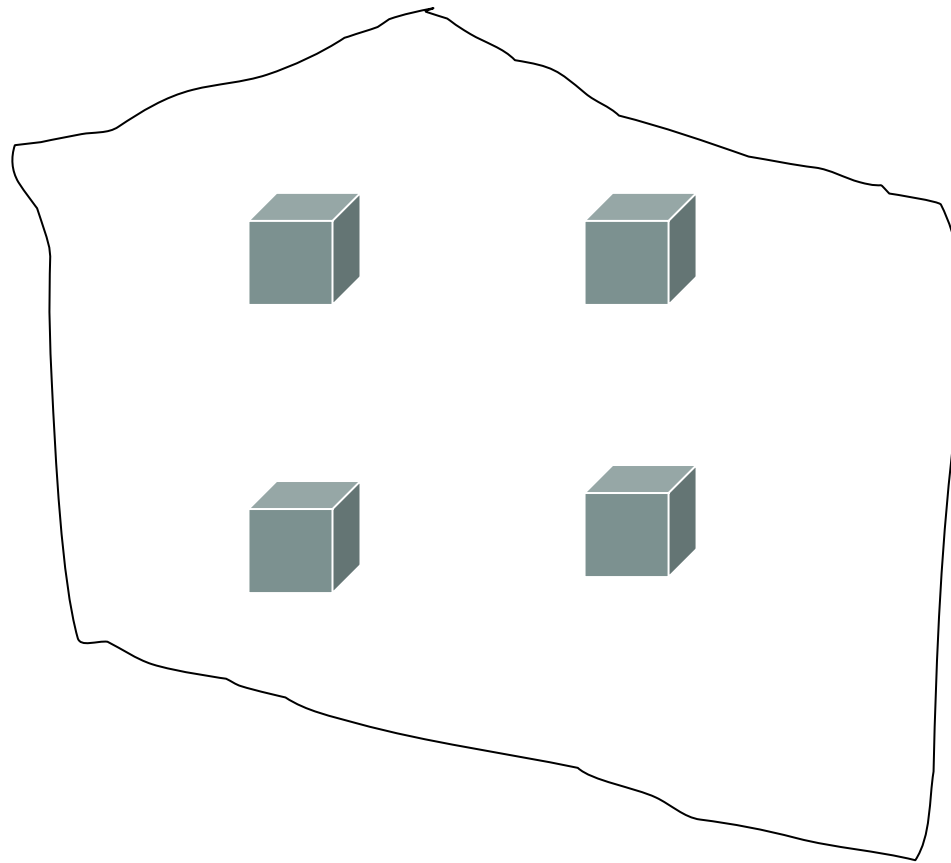
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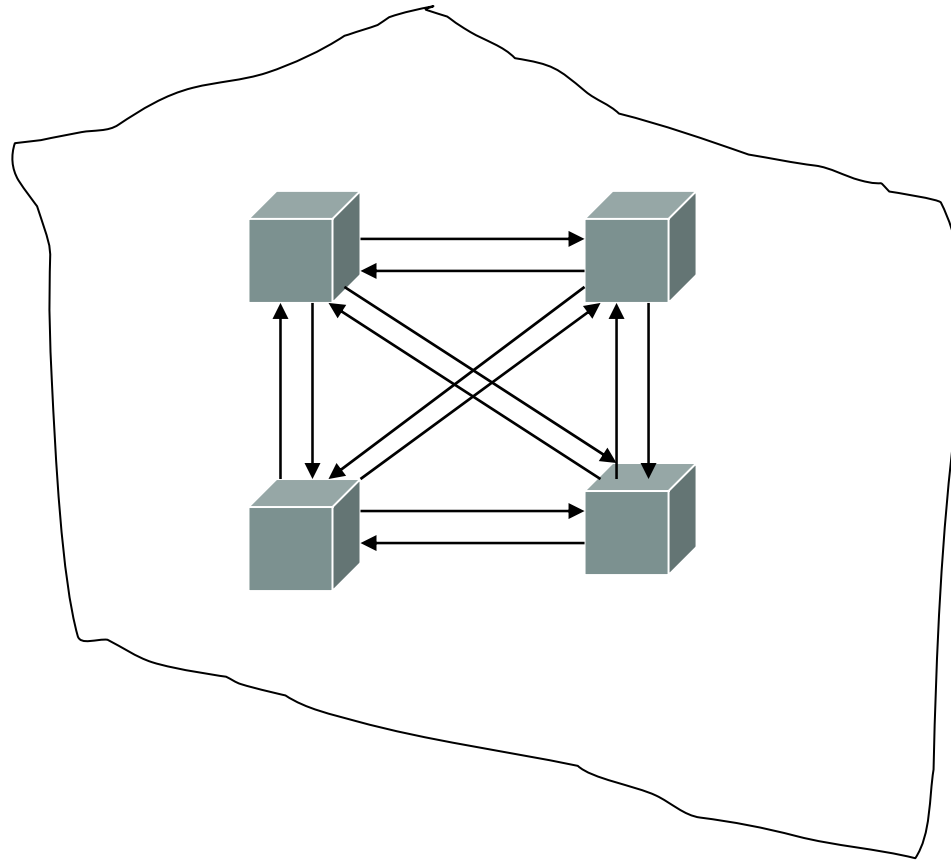
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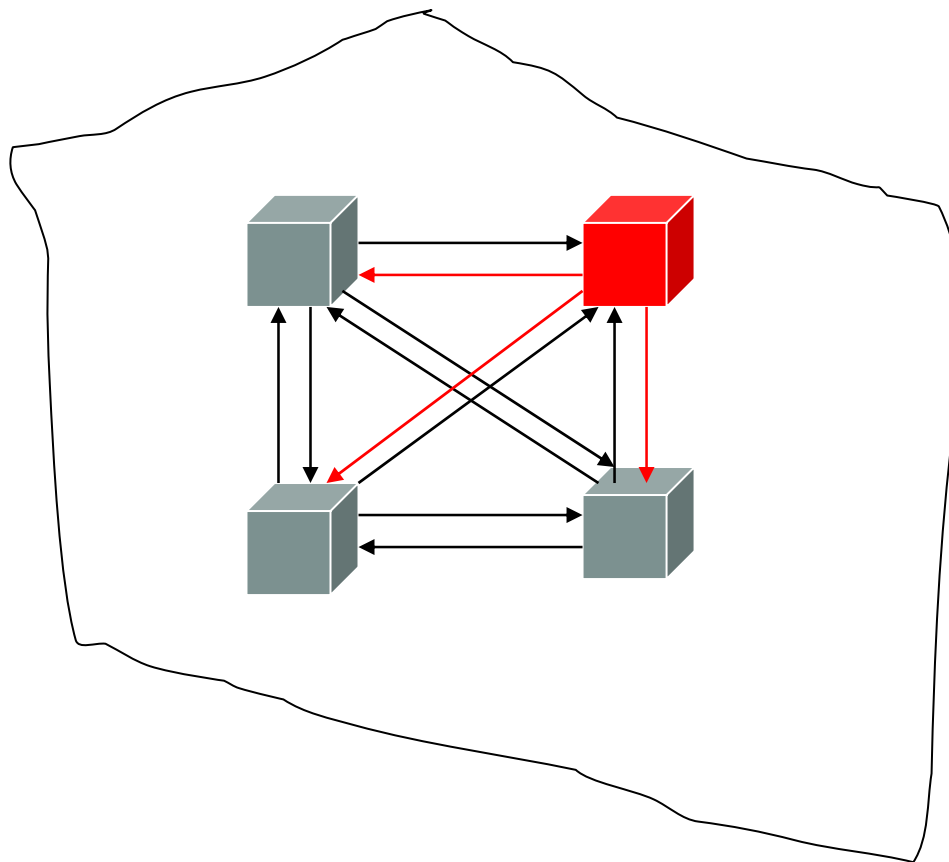
Banks in Belgium



Gross Exposures

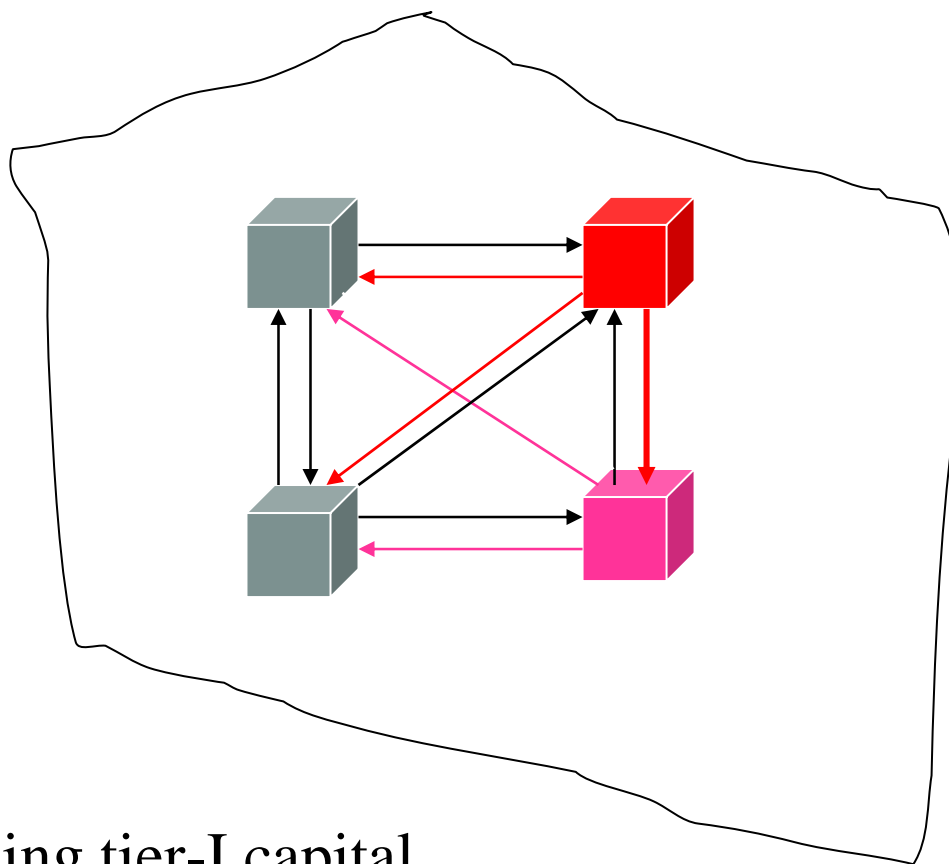


First Domino Bank Default



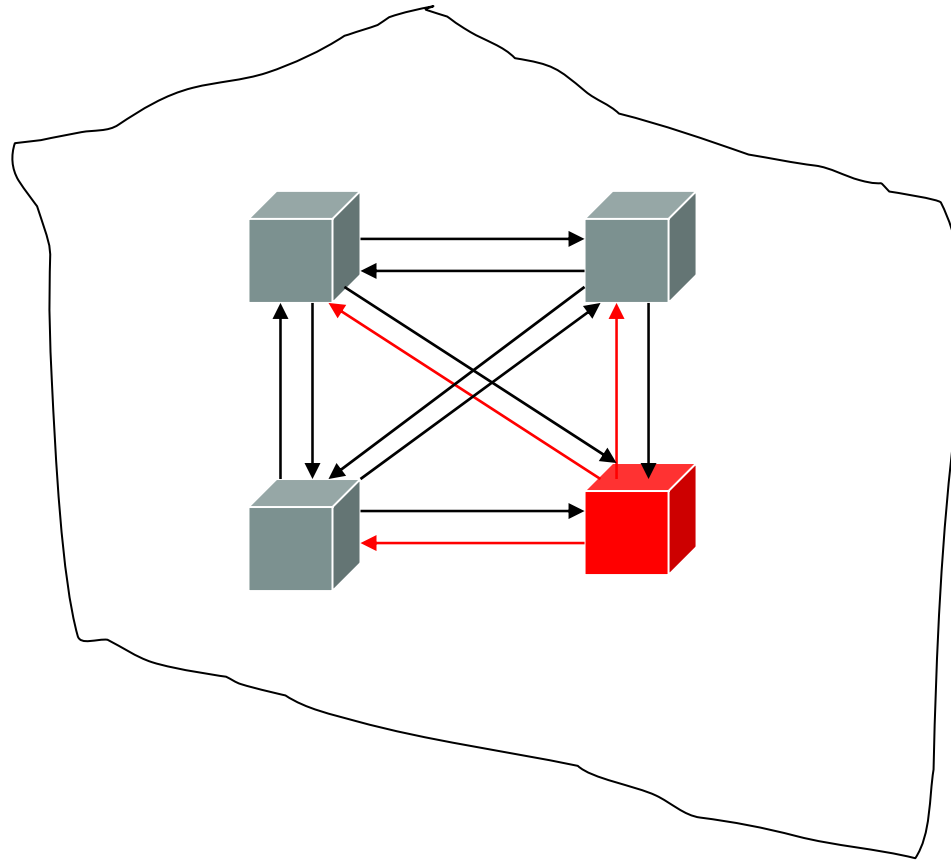
“Stress Testing”

Second Round Effect

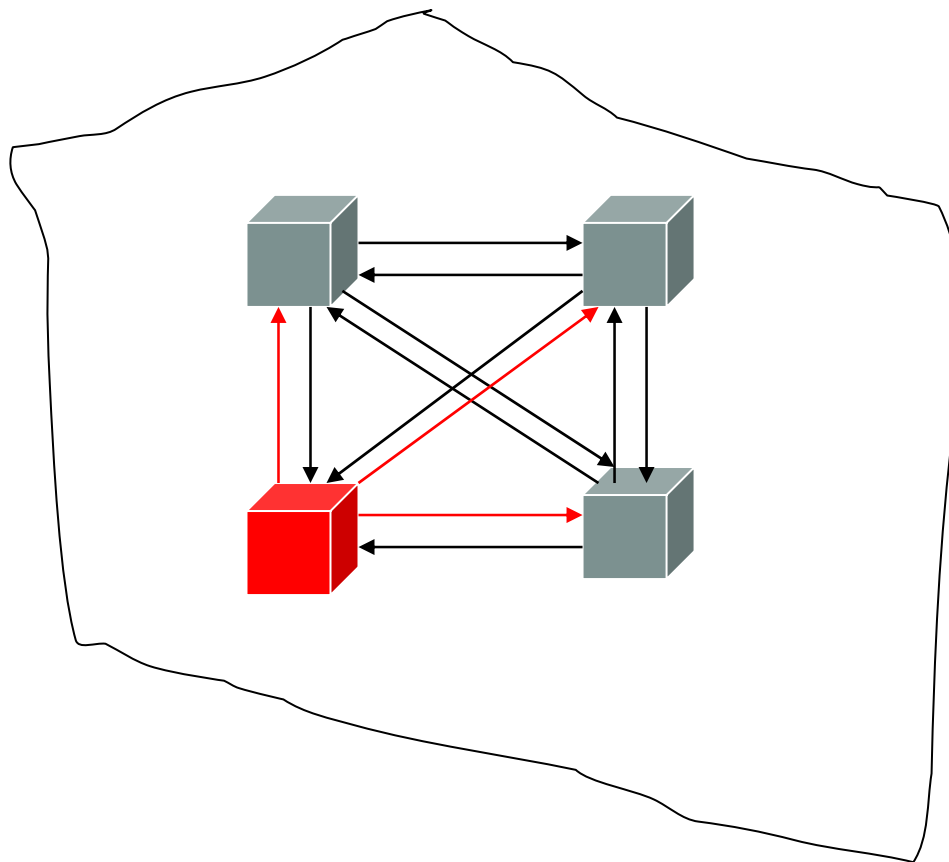


Another bank losing tier-I capital

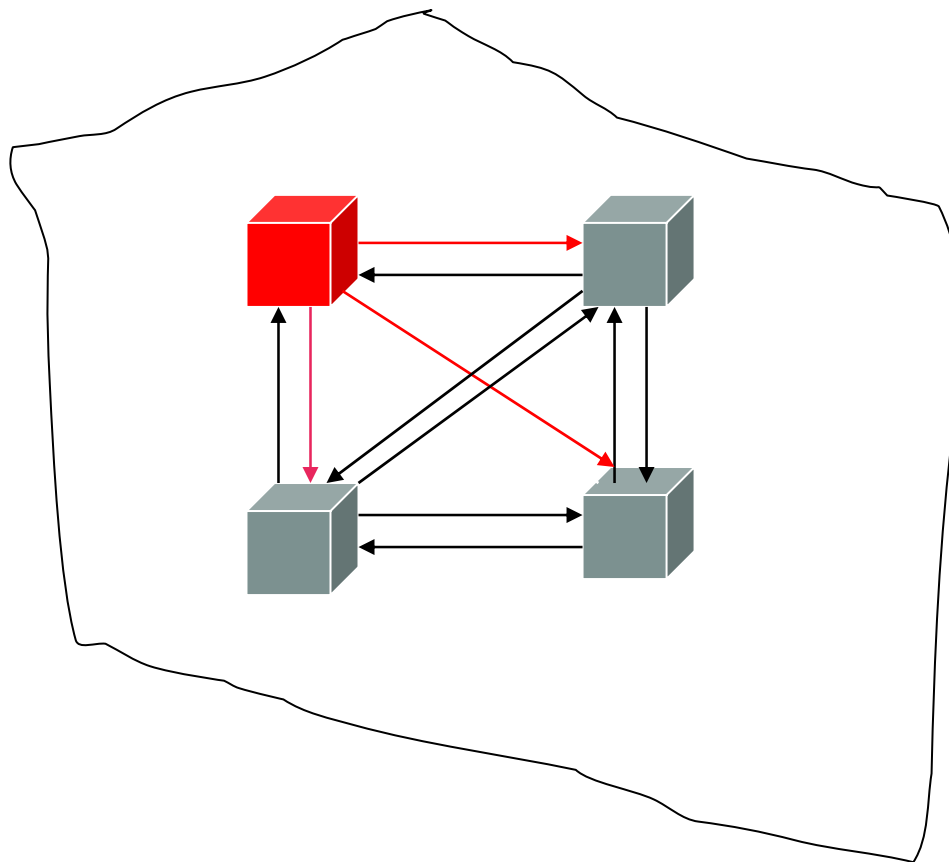
Another First Round Domino Effect



Another First Round Domino Effect



Another First Round Domino Effect



Indicators of Contagion

- Worst-case scenario
 - % total banking assets lost is greatest
- Number of cases of contagion
- Number of rounds in worst-case scenario

Loss Given Default

100%

80%

60%

40%

20%

Results

2002

Almost no contagion

1990-1995

More contagion

Results

2002

Almost no contagion

comparable to other countries

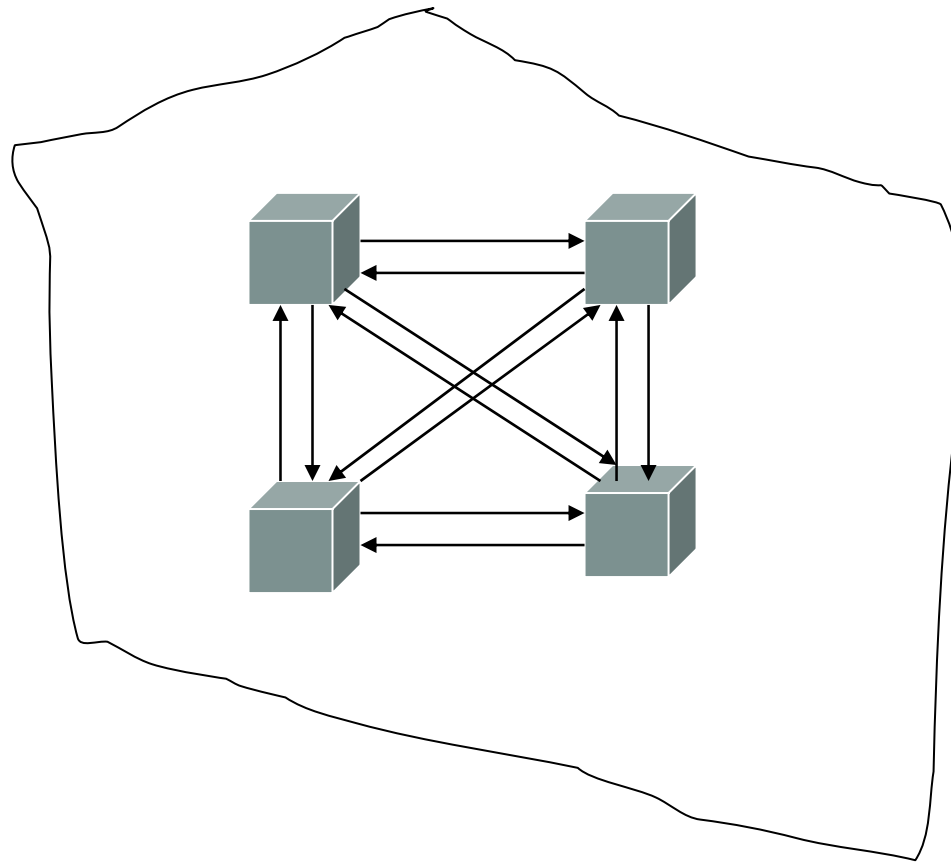
1990-1995

More contagion

contribution of the paper

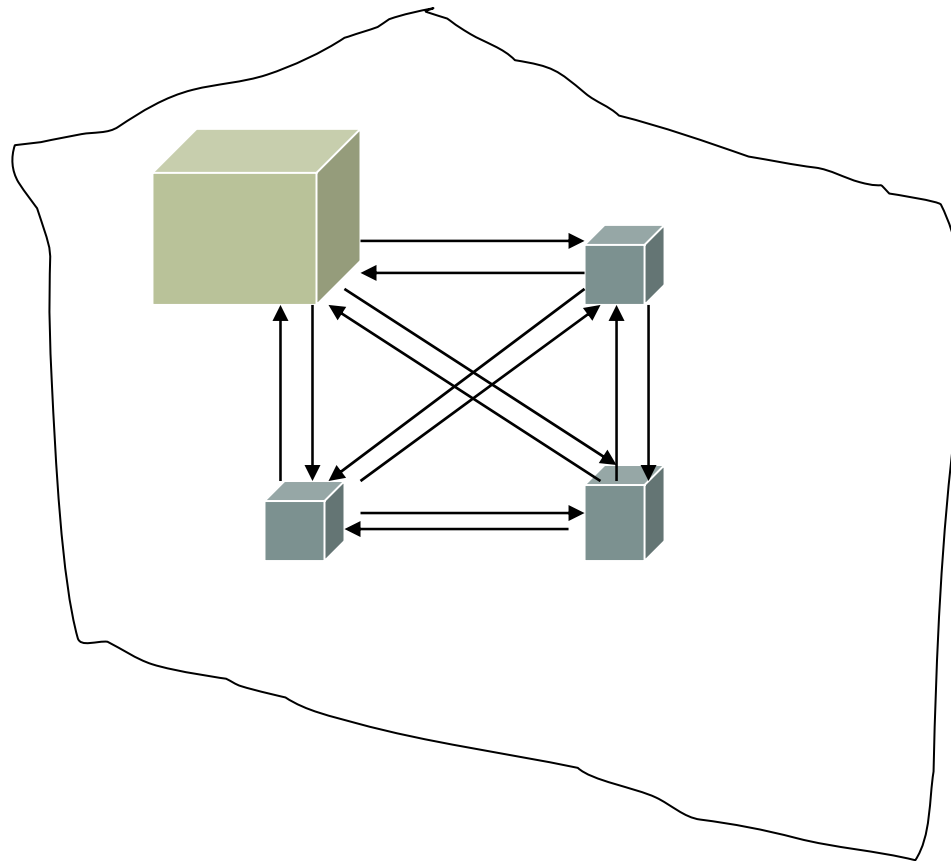
Why this decrease in contagion?

1992-1995

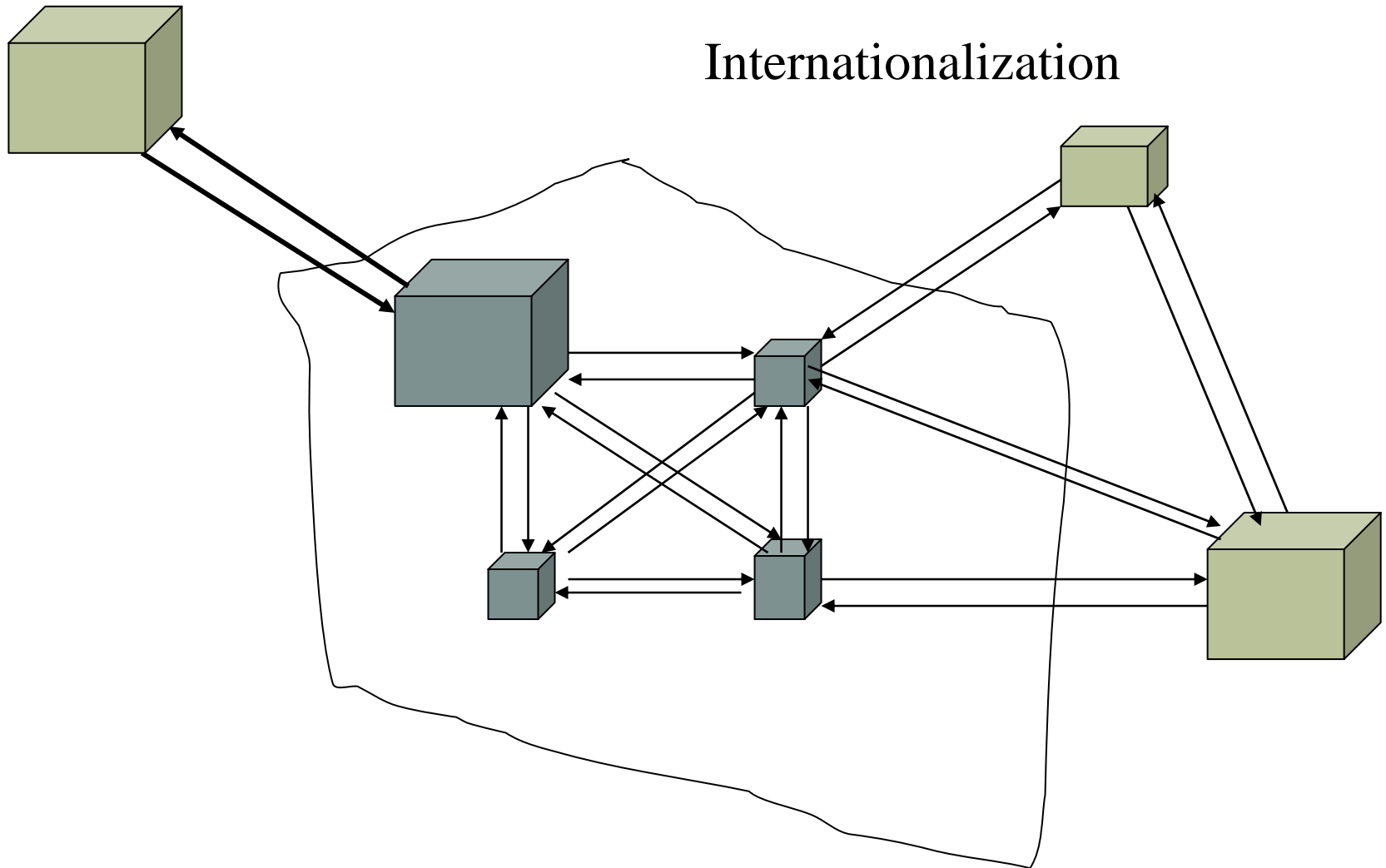


2002

Money-center interbank structure



Internationalization



Findings possibly difficult to interpret?
Data Issues.

N: Domestic, M: Foreign Banks

X_{11}	...	X_{1N}	X_{1N+1}	...	X_{1N+M}	Assets
...		...	...		...	Assets
X_{N1}	...	X_{NN}	X_{NN+1}	...	X_{NN+M}	Assets
X_{N+11}	...	X_{N+1N}	X_{N+1N+1}	...	X_{N+1N+M}	Assets
...		...	...		...	Assets
X_{N+11}	...	X_{N+1N}	X_{N+1N+1}	...	X_{N+1N+M}	Assets
Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	Liabilities	

B2B, B2F, F2B, F2F

x_{11}	...	x_{1N}	x_{1N+1}	...	x_{1N+M}	
...	B2B	...	...	B2F	...	
x_{N1}	...	x_{NN}	x_{NN+1}	...	x_{NN+M}	
x_{N+11}	...	x_{N+1N}	x_{N+1N+1}	...	x_{N+1N+M}	
...	F2B	...	...	F2F	...	
x_{N+11}	...	x_{N+1N}	x_{N+1N+1}	...	x_{N+1N+M}	

Missing Data: No F2B and F2F

X_{11}	...	X_{1N}	X_{1N+1}	...	X_{1N+M}	
...		
X_{N1}	...	X_{NN}	X_{NN+1}	...	X_{NN+M}	

Only Exposures >10% Own Funds

0	...	>10%	>10%	...	>10%	
...		
>10%	...	0	>10%	...	>10%	

Exact Sum Domestic Exposures

0	...	X_{1N}				$\text{SUM}_j(X_{1j})$
...	
X_{N1}	...	0				$\text{SUM}_j(X_{Nj})$
$\text{SUM}_i(X_{i1})$	...	$\text{SUM}_i(X_{iN})$				

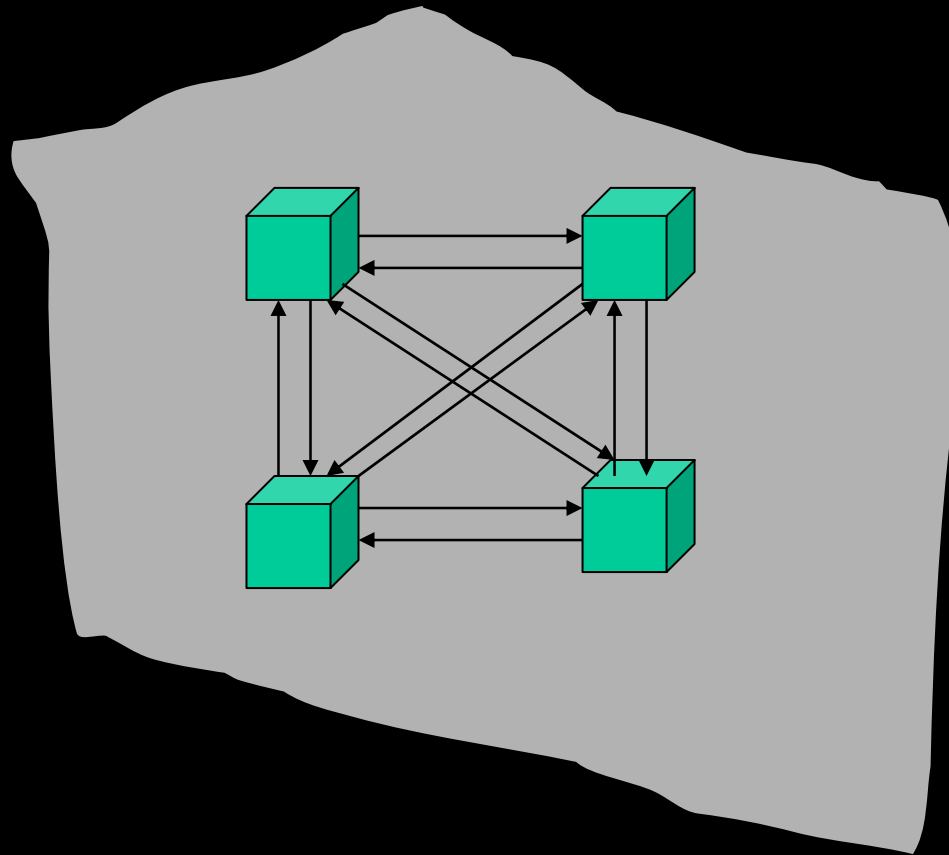
Combining Information

- *Large exposure technique*
- *Aggregate exposure technique*
- *Mixed technique*

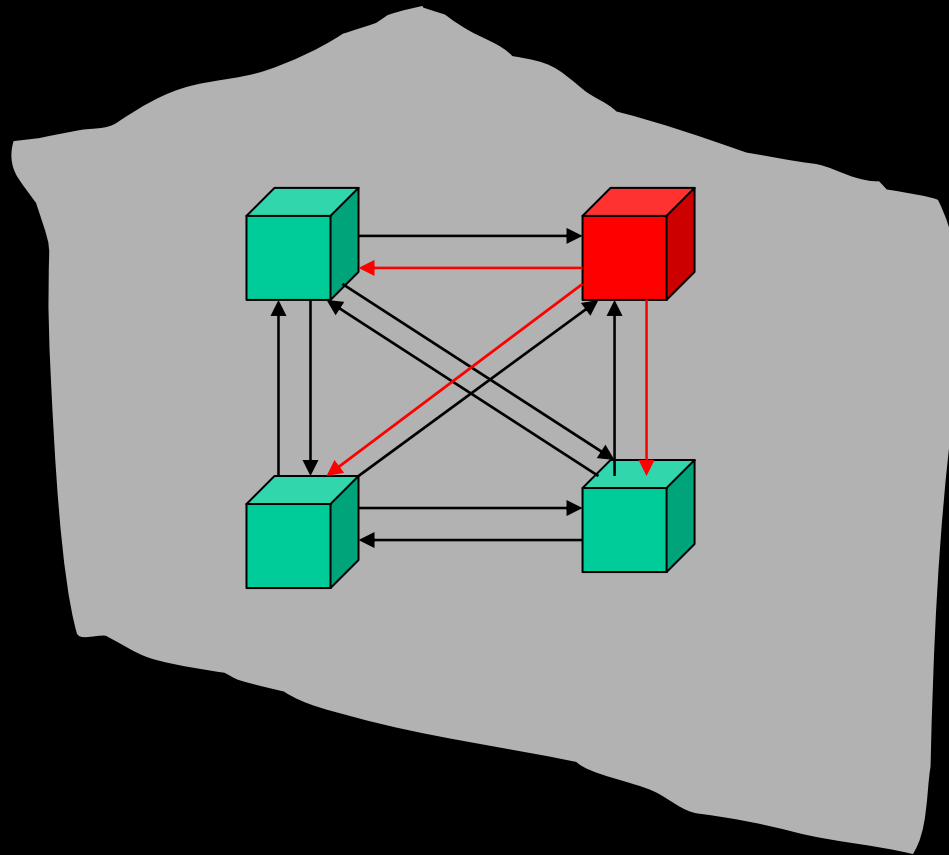
Clever and exhaustive useage of the available information!

But possibly not enough to deliver the current interpretation?

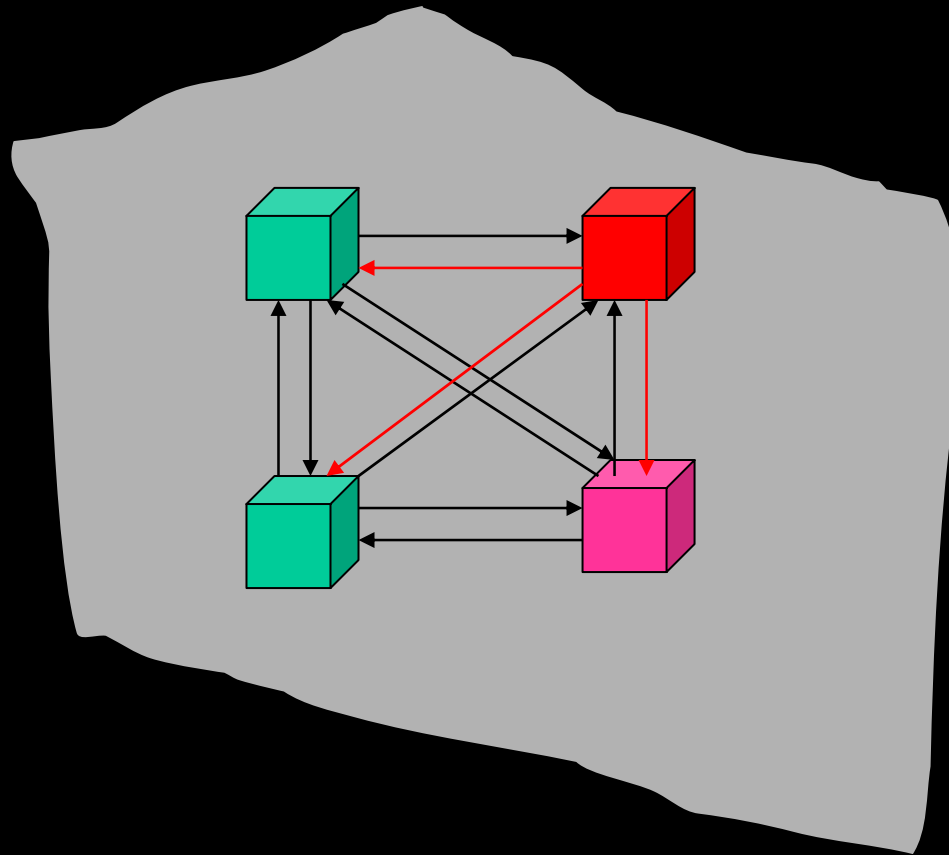
1992-1995

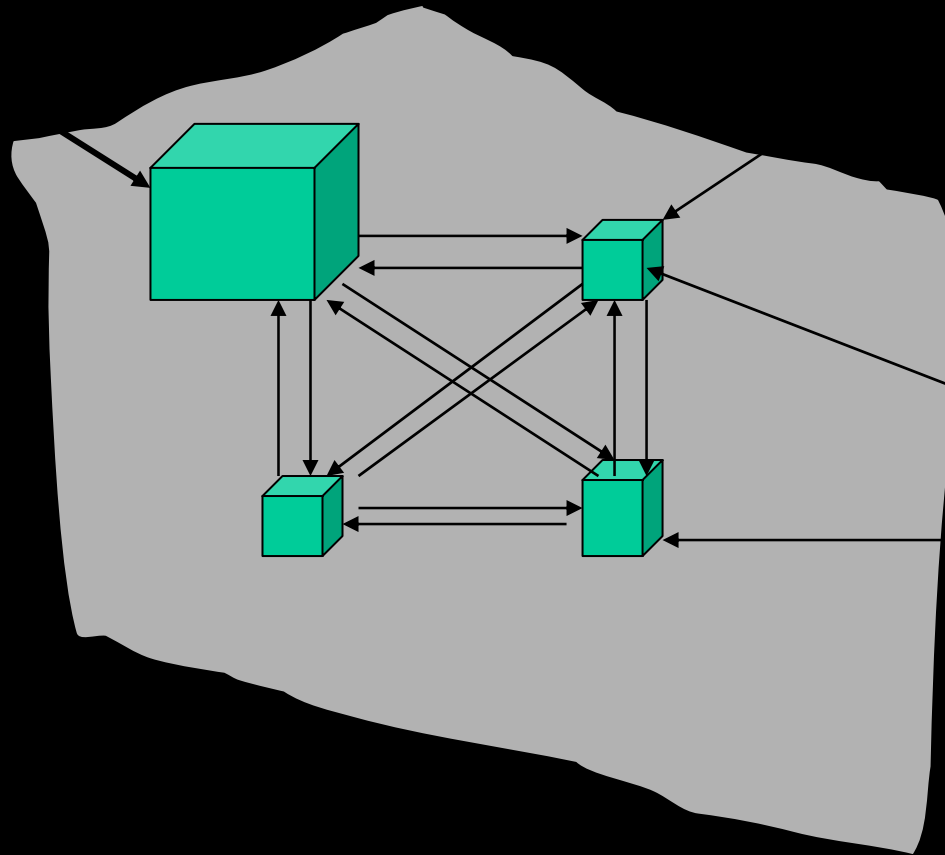


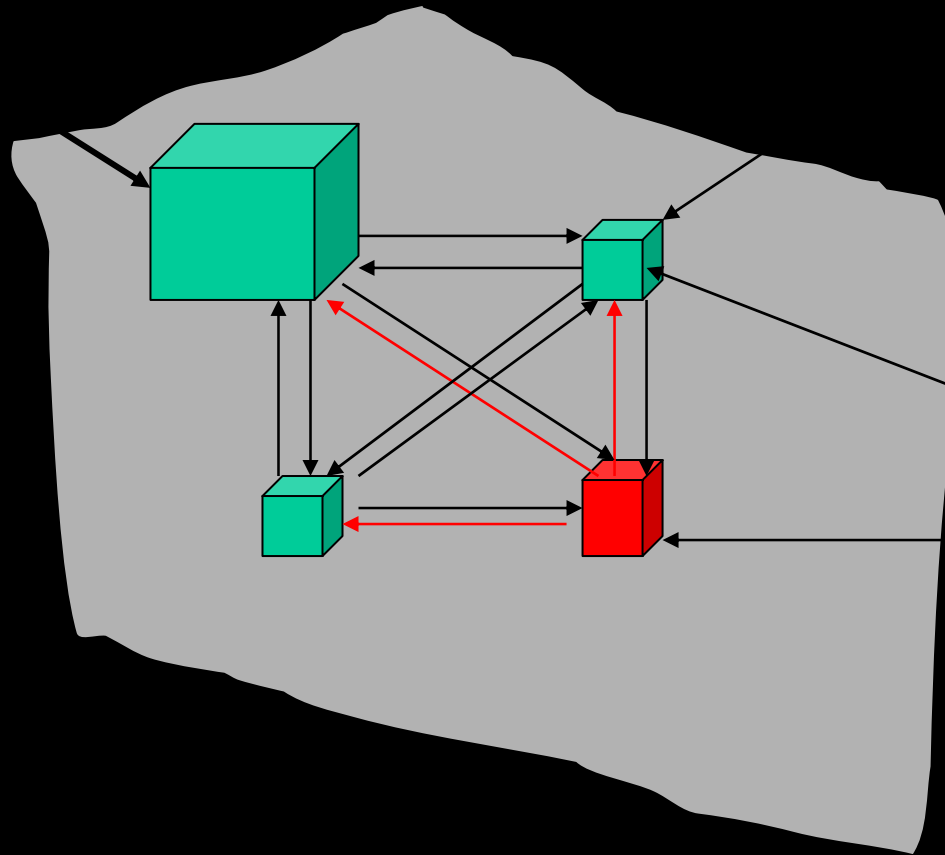
1992-1995

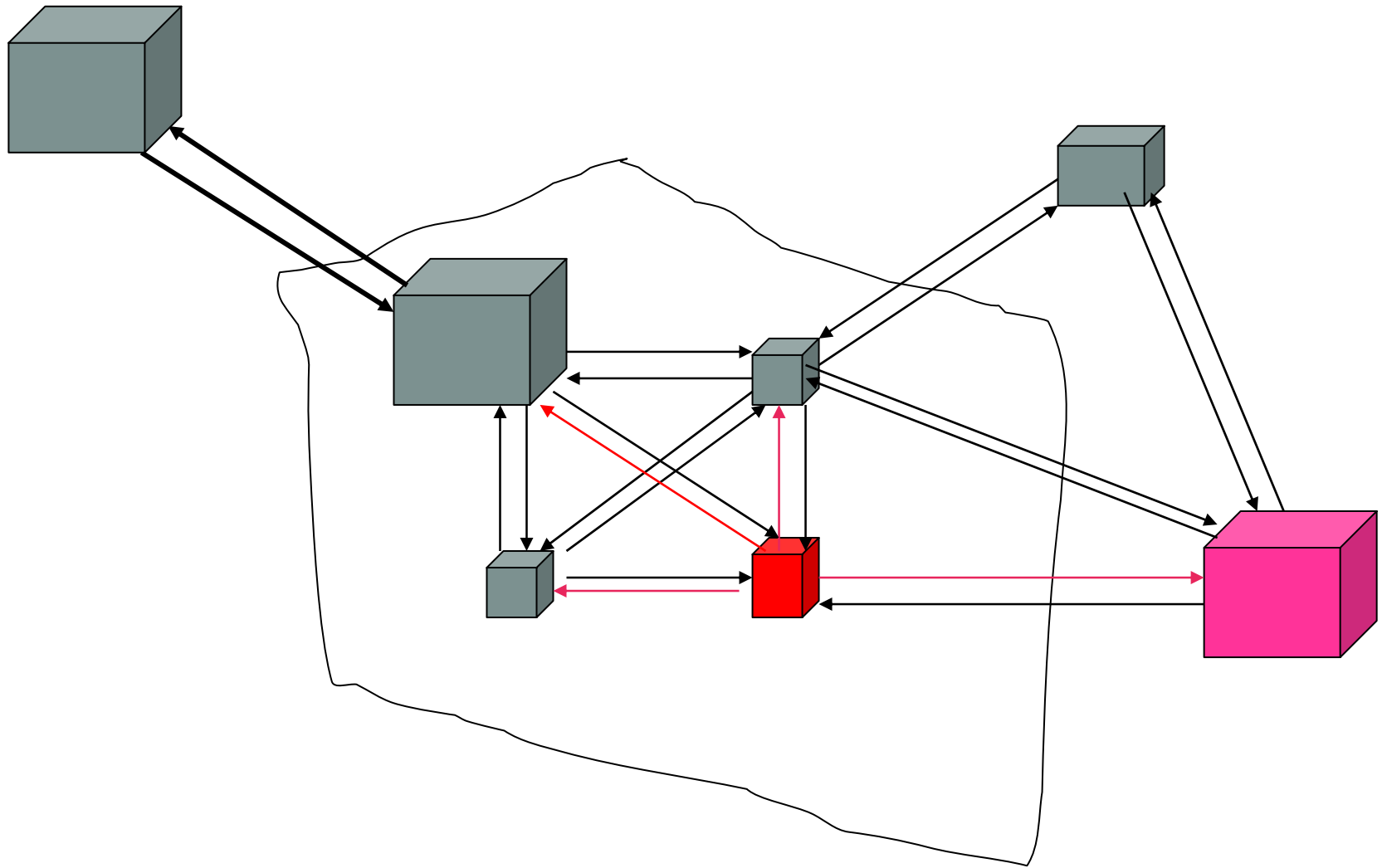


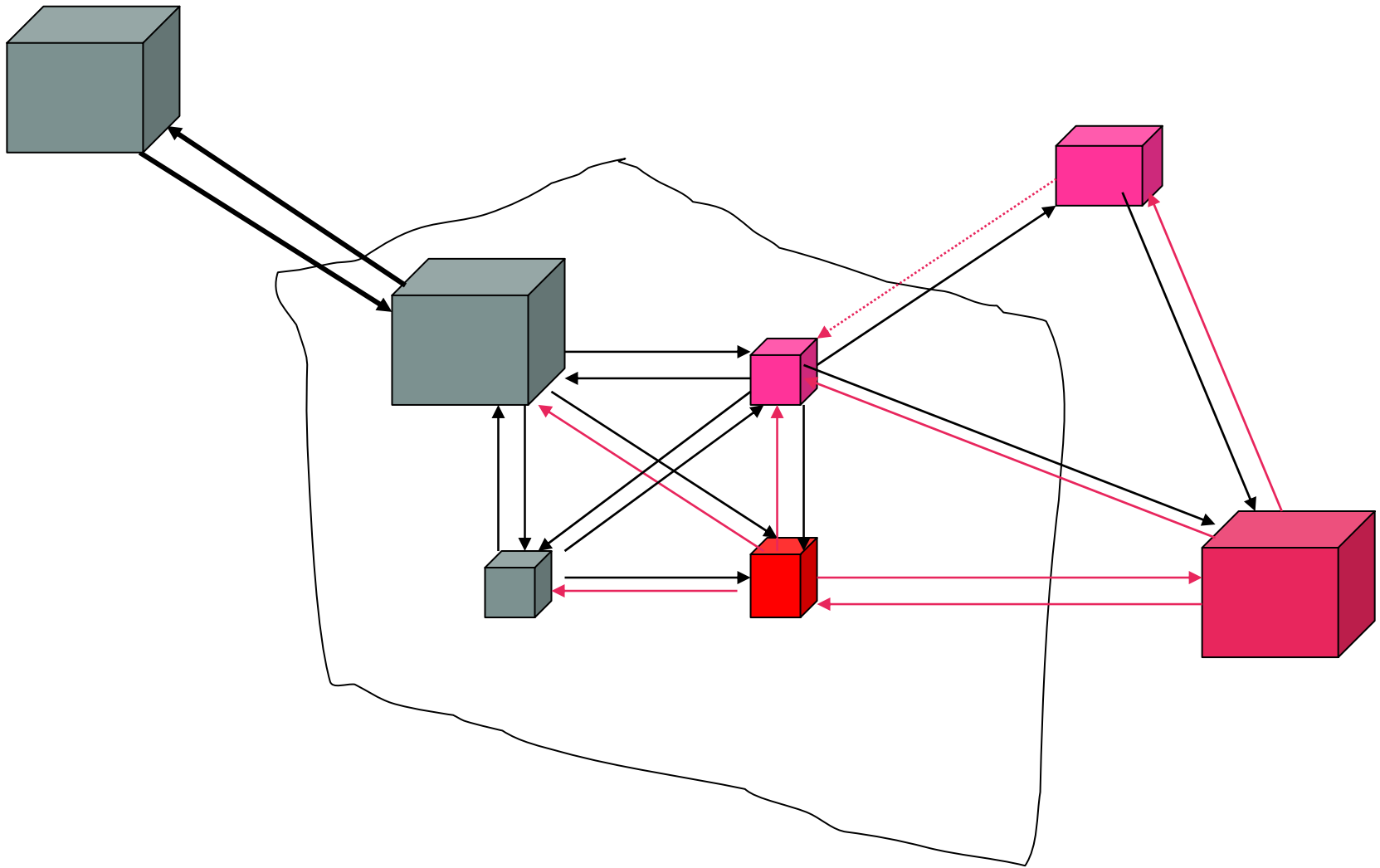
1992-1995











Censoring Problem

- Dependent Contagion Variable(s) are all censored
- Instrumenting the independent variables may not solve the problem

Censoring Problem May Be Severe

- Think about 2nd, 3rd, ... rounds!
- Censoring Problem possibly increased over time
 - ◆ Driving your findings?

How Relevant Is This Problem?

- Hard to know how many observations are censored!

- Are all countries equally affected?
 - ◆ *Level*: small and open systems, like Belgium, more affected than large and more closed systems, like Germany
 - ◆ *Change*: Belgium, always open, degree of censoring less affected over time

We can only speculate what this does to the findings

Possibly No Real Good Solutions?

- Hard to know for sure which observations are censored!
 - ◆ Needed to construct estimation adjustment

- Many assumptions about foreign banks would be needed to “lift” censoring

- Notice that testing reaction to foreign bank failures does not give you a handle on this issue

- Adjust interpretations?

Complete and Careful Paper

- Robustness is good, but focus ...
- Detailed comments on hardcopy.
- Enjoyed reading the paper!