Contagiousness of the Global Financial Network: An information-theoretic clustering approach

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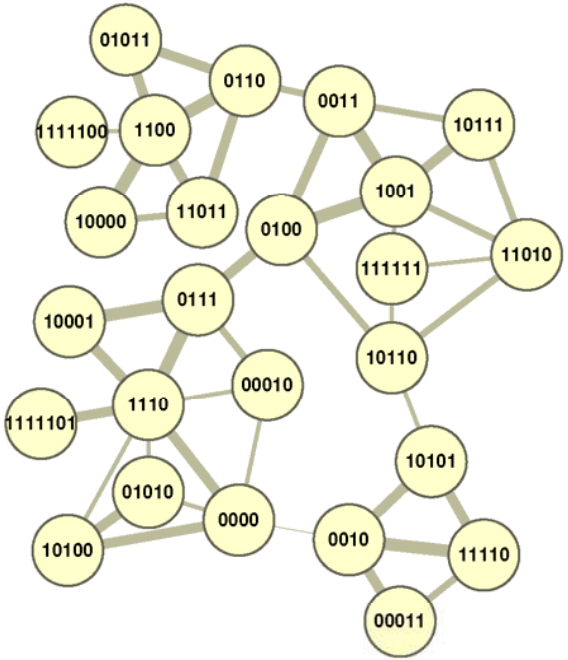
UCSB

Interconnectedness and Networks
Financial Stability: Markets and Spillovers
Washington DC, November 29-30, 2018



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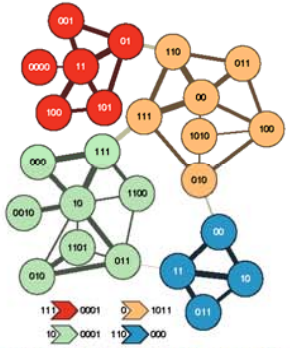
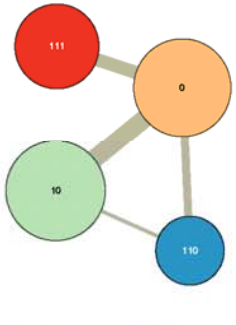
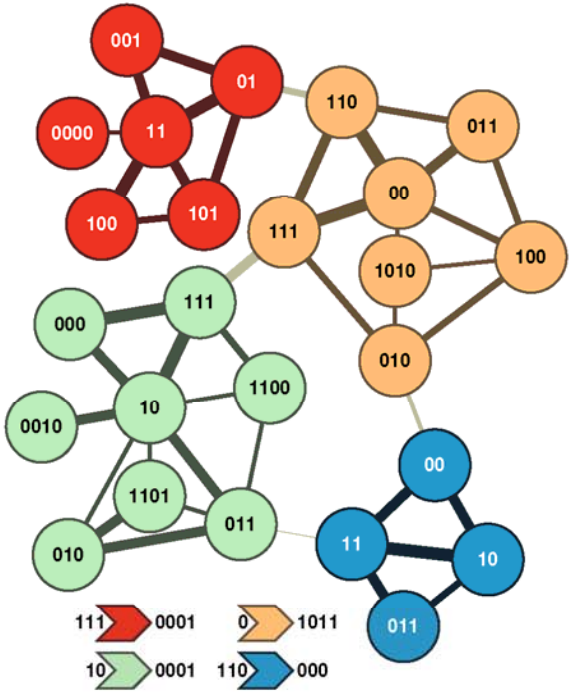




Rosvall and Bergstrom’s map equation



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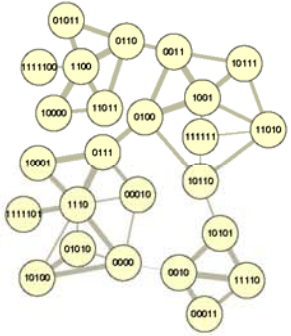

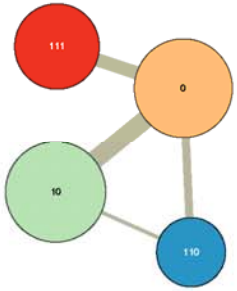

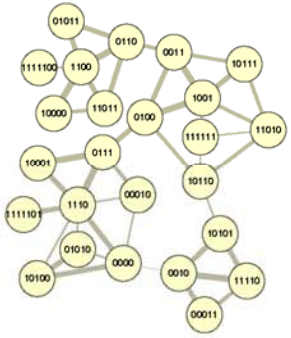
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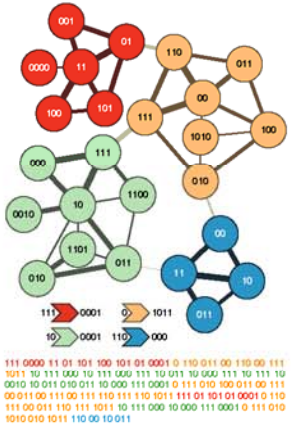
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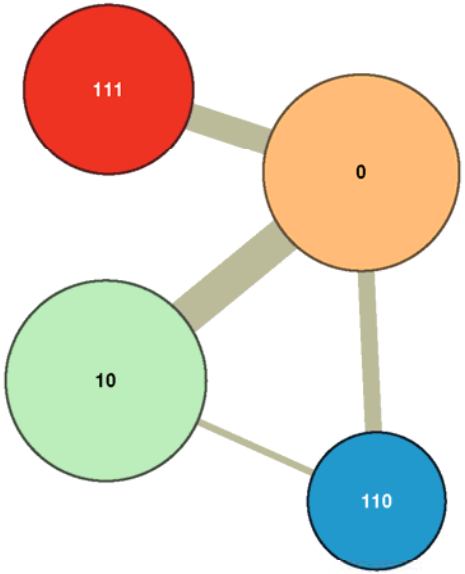
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Data

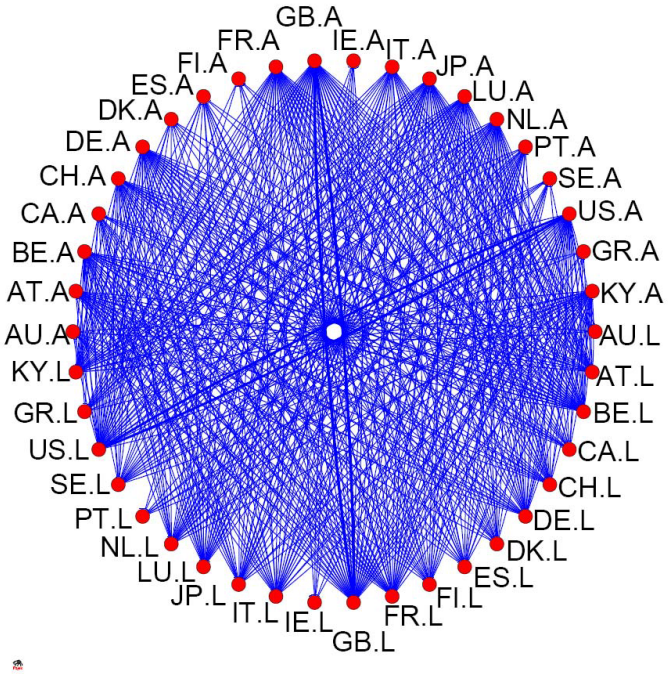
Bank for International Settlements locational statistics

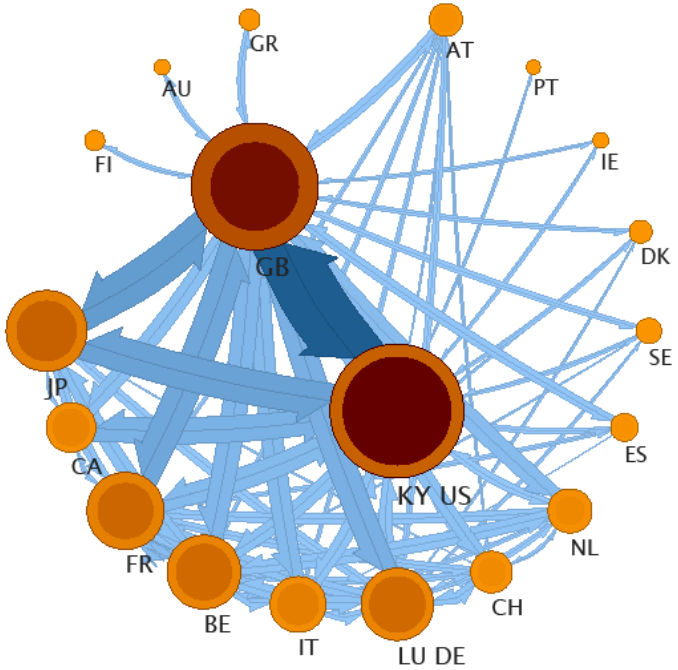
21 reporting countries in our network: Austria, Australia, Belgium, Canada, Cayman Islands, Switzerland, Germany, Greece, Denmark (excluding Faeroe Islands and Greenland), Spain, Finland, France (including Monaco), United Kingdom (excluding Guernsey, Isle of Man and Jersey), Ireland, Italy, Japan, Luxembourg, Netherlands, Portugal, Sweden, and the United States

73% of total reported claims on banks

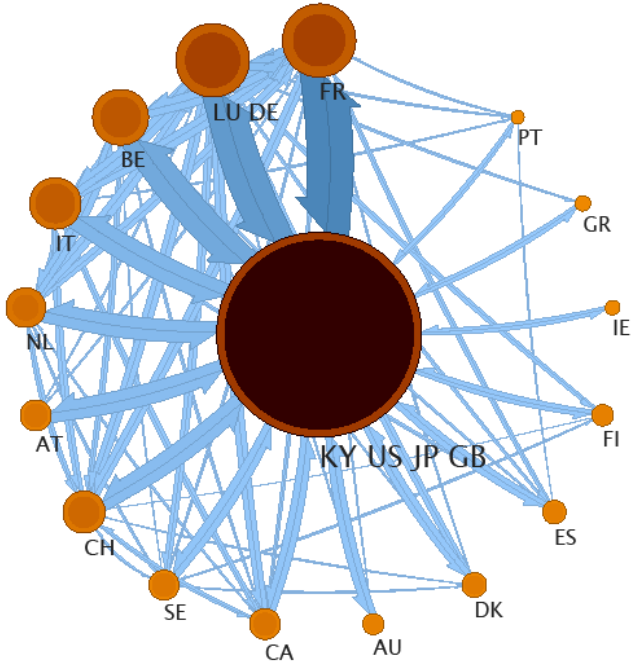
1985 Q1 to 2017 Q4

1985 Q1: Before and after clustering

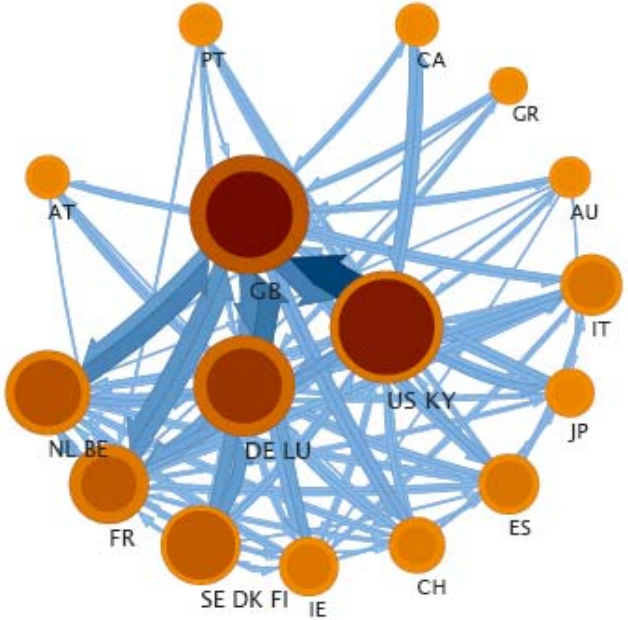




Changes in modular structure

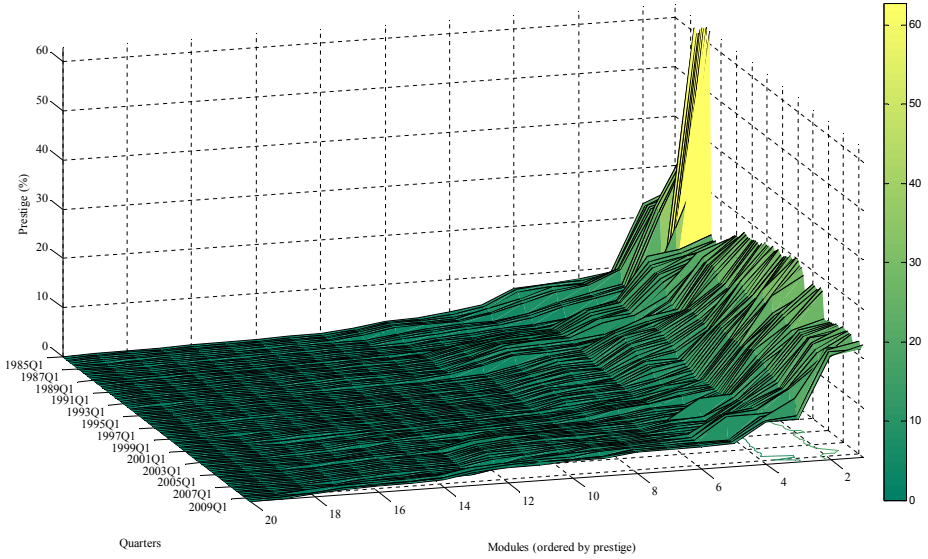


1989 Q3

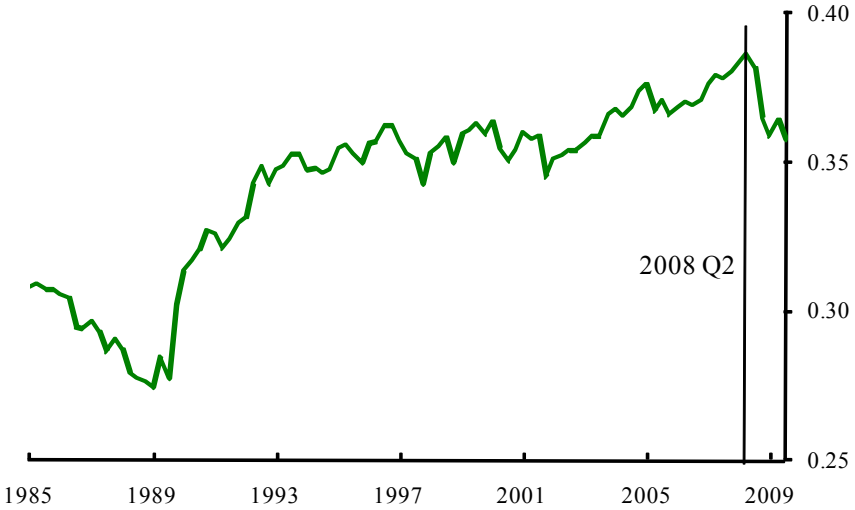


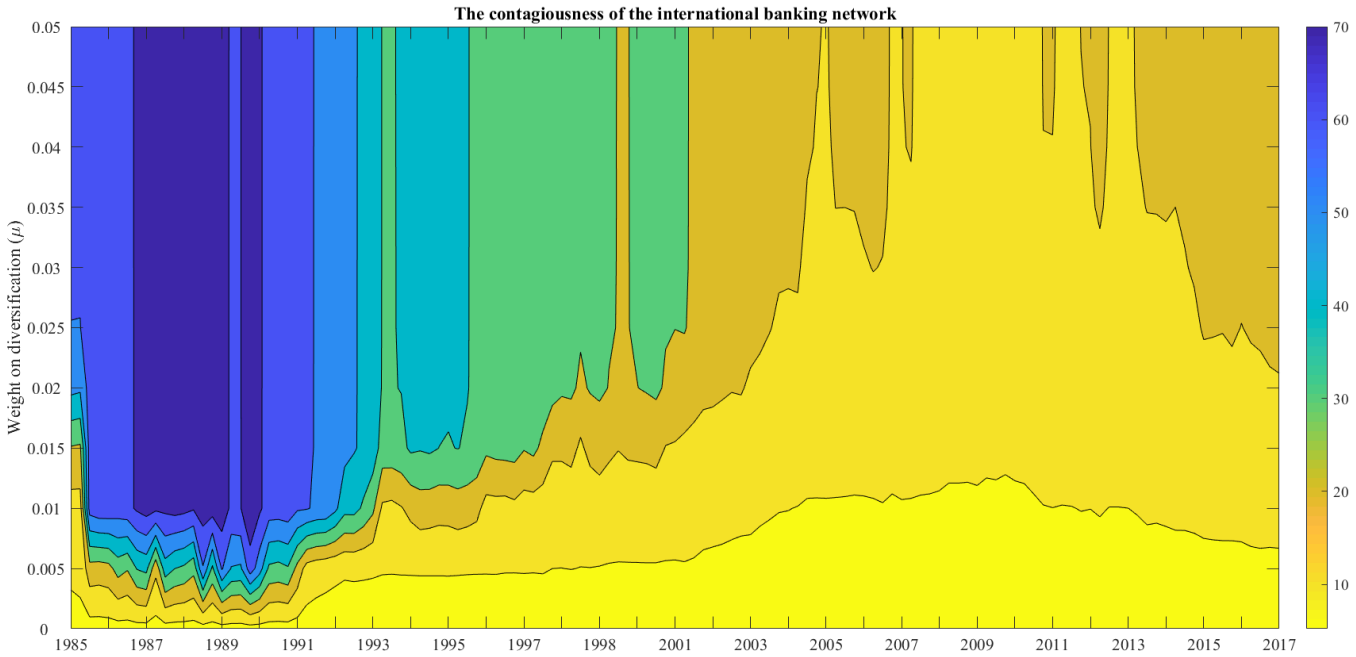
2008 Q3

Assessing the flow of financial stress



Modular density



Modular outflow

Contagion or risk sharing