



EUROPEAN CENTRAL BANK

EUROSYSTEM

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**Discussion slides on  
Peter Sarlin's presentation on  
“Macroprudential oversight,  
risk communication and  
visualizations: The case of  
mapping techniques”**

11th Payment and Settlement System Simulation Seminar

\*NOTE: The views expressed below are those of the discussant and do not necessarily reflect those of the ECB.

# Macroprudential oversight

– can authorities “outsmart” the market?

- Paul Samuelson: “micro efficient” but “macro inefficient” markets
- Sources for market imperfections
  - asymmetric and incomplete information
  - externalities
  - principal-agent problems

# The case for mapping methods

The financial crisis led authorities to collect

- more granular data, e.g. transaction level data
- wider range of data, e.g. on counterparties or collateral

at the same time the focus shifted from analysing individual actors to analysing interrelations between different (types of) actors and whole systems

-> new quantitative and qualitative perspective

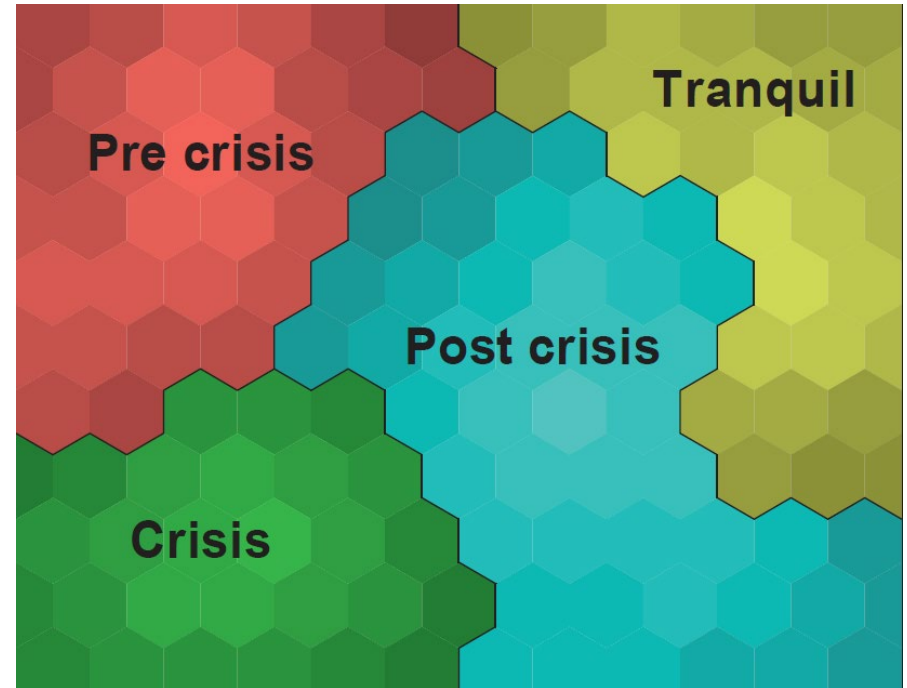
-> need to evaluate more data and communicate more complex results

-> aim: reduce dimensions, identify patterns, and aid **human** recognition

# Peter's SOFSM

## features

- Cells and borders allow identification of the current state
- Distances can be interpreted
- Lightest cell = centre of cluster
- Shades indicate proximity
- association of underlying variables with states is easily possible (not shown)



# Peter's SOFSM

## questions

- Interpretation of x- and y-axis?
- Incorporate population frequencies?
- Assign shades across clusters  
-> transition probabilities/paths?
- Are we determined to move with the clock or can we move “against the clock”?

