Macro-prudential Supervision and the ESRB: Setup, Tools and Data

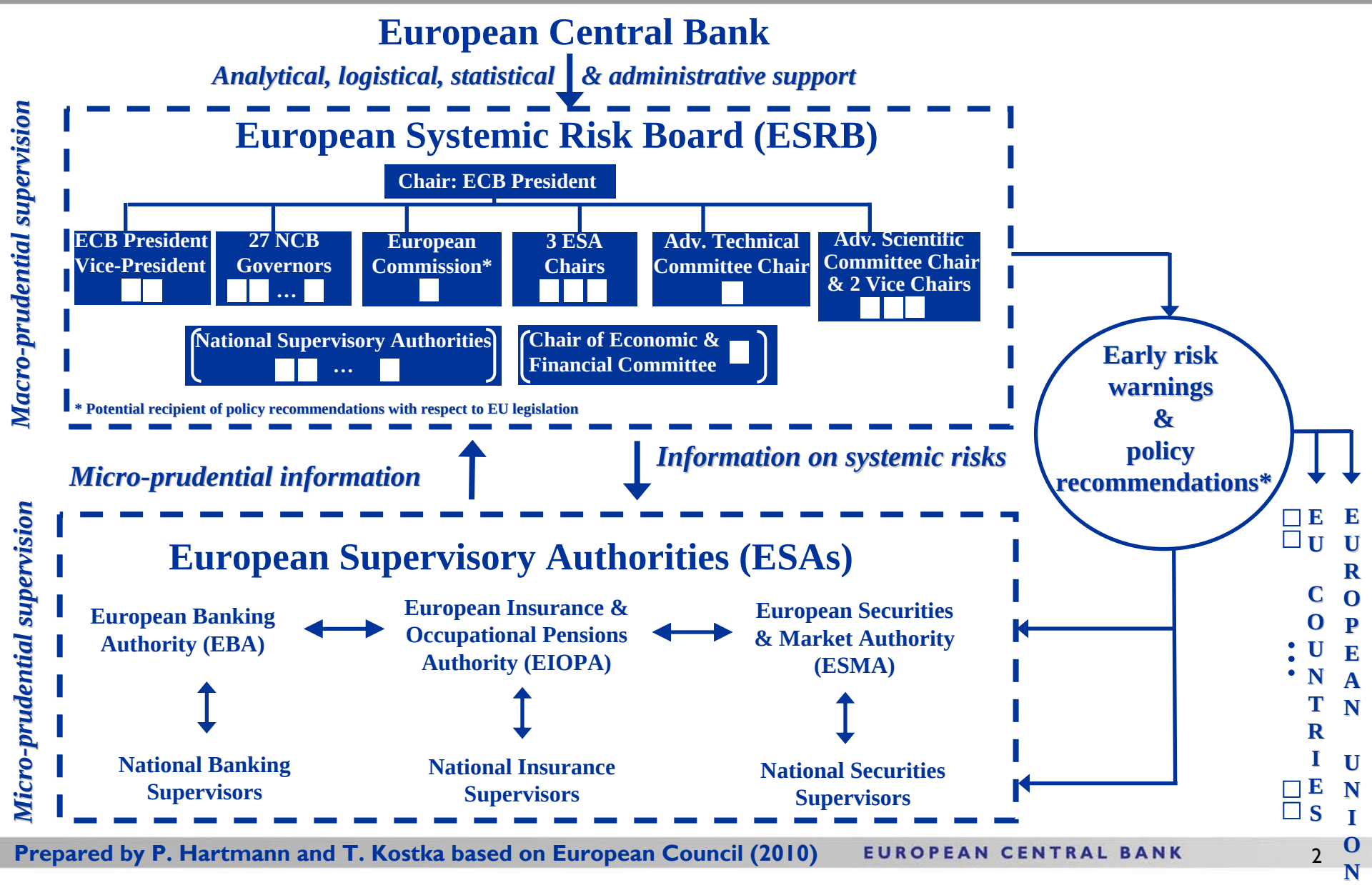
Philipp Hartmann

European Central Bank

National Bureau of Economic Research "Systemic Risk Measurement" Initiative, Pre-conference, Columbia University, New York, 27 October 2010

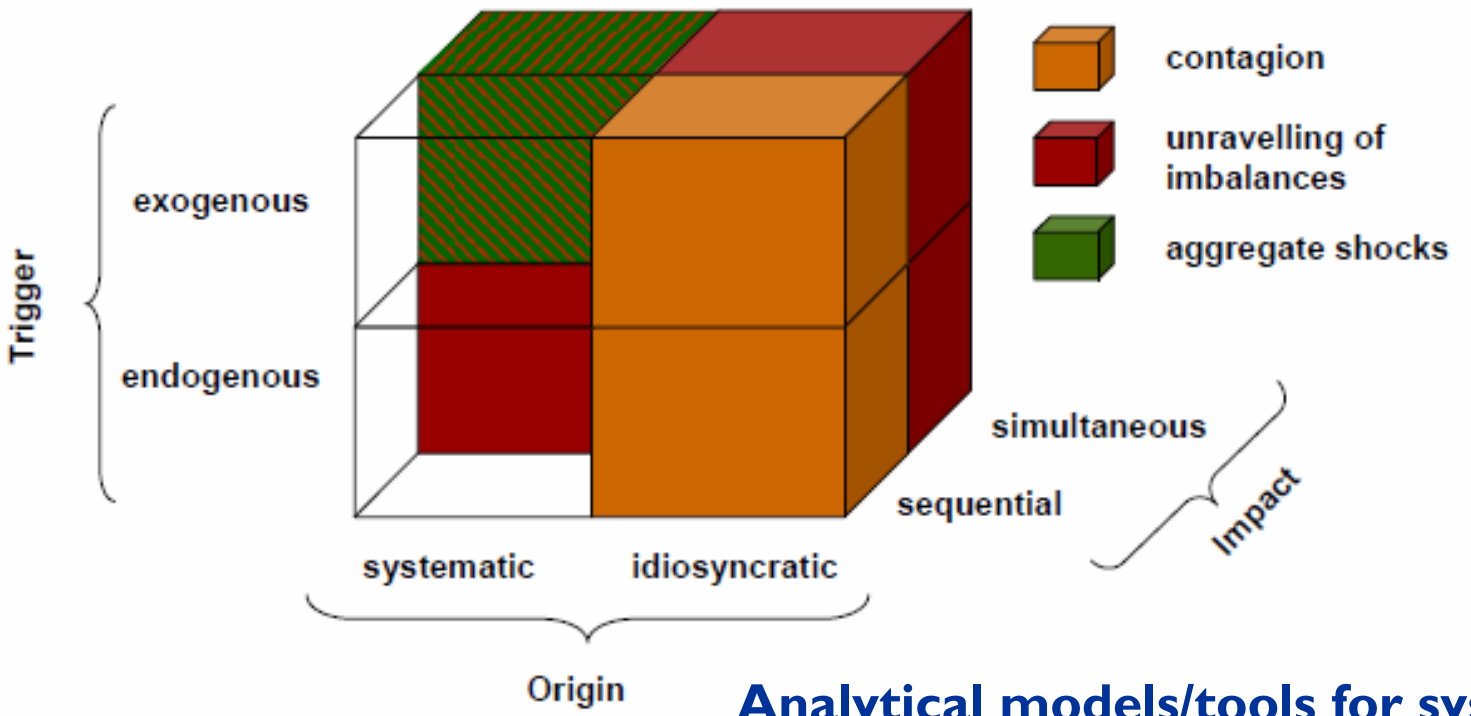
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European System of Financial Supervision



Systemic risk and identification tools

The systemic risk cube:



Analytical models/tools for systemic risk:

- **SR 1: Contagion – Contagion and spillover models**
- **SR 2: Endogenous build-up and unravelling of widespread imbalances – Early warning indicators and models**
- **SR 3: Aggregate shocks – Macro stress testing models**

Source: Author based on de Bandt, Hartmann and Peydro (2009) and ECB (2010)

Selected data issues

- **Contagion and spillover models**
  - **Key data: Bilateral exposures**
    - **Micro: Individual financial data**
    - **Macro: Flow of funds – "whom-to-whom" accounts, exchange rate**
  - **Conceptual problem: Amplification mechanisms – detailed position data**
- **Early warning models**
  - **Key data: Issue dependent – e.g. property price indices**
  - **Practical and conceptual problems: Instances of crises, Lucas critique**
- **Macro-stress testing models**
  - **Key data: Position data, estimation of PDs and LGDs**
  - **Conceptual problems: Model consistency, non-banks, two-way relationship between financial sector and wider economy**
- **"Micro data", on and off-balance sheet, are a key ingredient (granularity!)**
- **Ideally, we would like to see global position/exposure "map"**
- **Requires, inter alia, transatlantic collaboration at a large scale**
- **Importance of international financial data standardisation**
  - **All instruments' basic characteristics stored with possibility to link them**
  - **Further step: Establishment of a reference data utility (see Annex)**

Thank you for your attention!

Philipp Hartmann

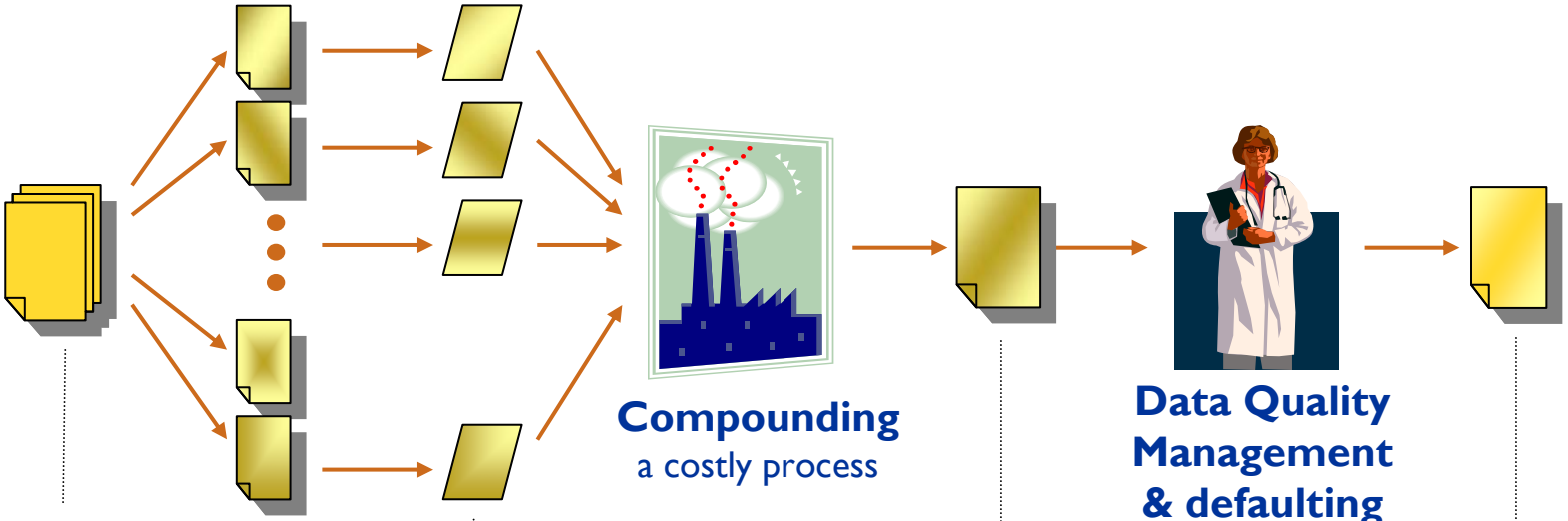
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Annex

Standardisation problem in data supply chain



Prospectus
"perfect", public data source, but no common language

Commercial data sets
error prone, selective, costly production, duplicate efforts, proprietary formats

Candidates
for compounding; a costly collection

Compounding
a costly process

Compound
first shot

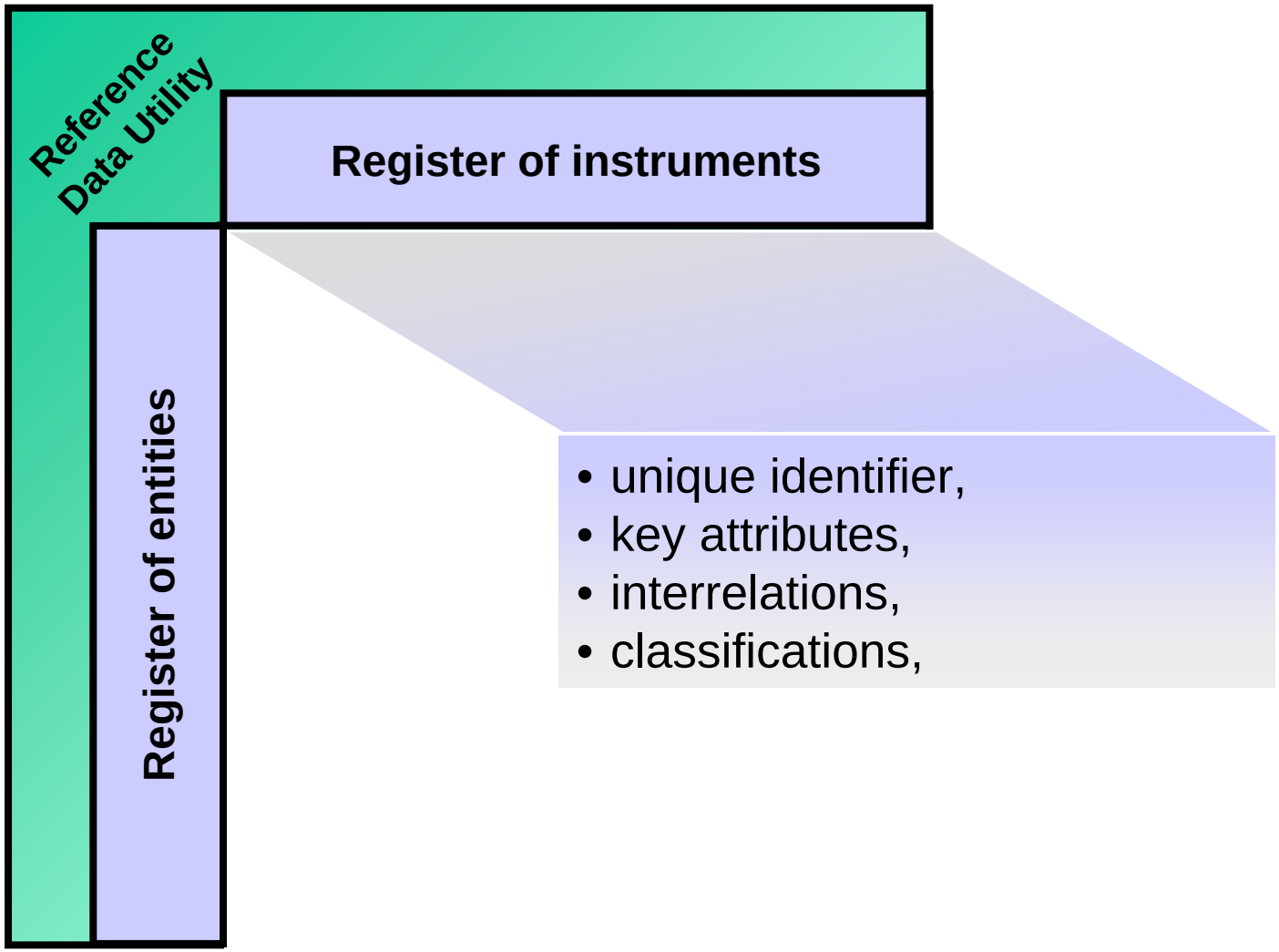
Data Quality Management & defaulting
Costly, burdensome, often just palliative

Golden Copy
after DQM & defaulting, still not back to perfect - and not standard.

Duplication and non-standardisation in data capture hamper the whole downstream value chain.

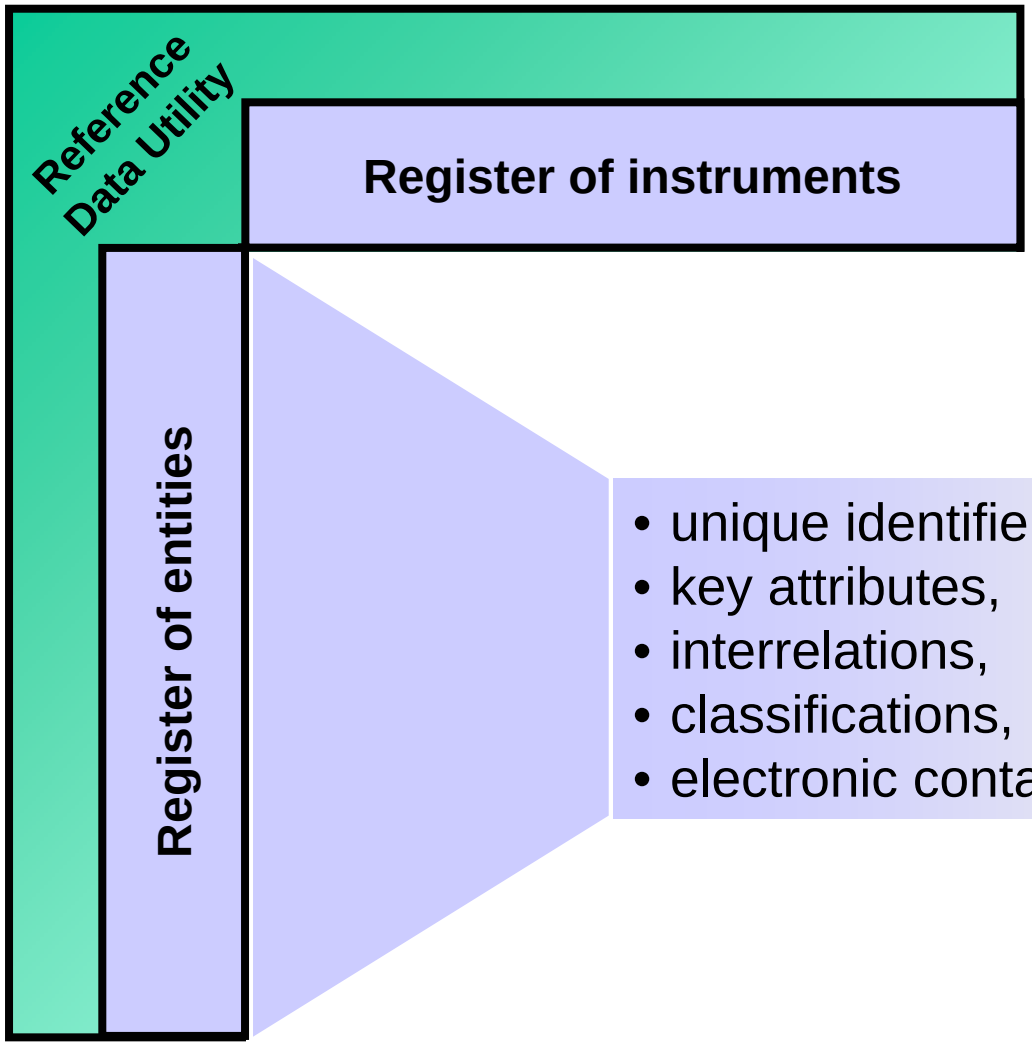
Source: Courtesy Francis Gross (ECB, DG Statistics)

Two reference registers: the Thin Utility's frame



Source: Courtesy Francis Gross (ECB, DG Statistics)

Two reference registers: the Thin Utility's frame



Source: Courtesy Francis Gross (ECB, DG Statistics)

References

- Constancio (2010), Macro-prudential supervision in Europe, Dinner Address delivered at the ECB-CEPR-CFS Conference on "Macro-prudential regulation as an approach to contain systemic risk: Economic foundations, diagnostic tools and policy instruments", Frankfurt, 27 September
- Council of the European Union (2010), Proposal for a regulation of the European Parliament and the Council on European Union macro prudential oversight of the financial system and establishing a European Systemic Risk Board, 14 September
- De Bandt and Hartmann (2000), Systemic risk: A survey, ECB Working Paper, no. 35, November
- De Bandt, Hartmann and Peydro (2009), Systemic risk: An update, Berger, Molyneux and Wilson (eds.), *Oxford Handbook of Banking*, Oxford University Press
- European Central Bank (2009), The concept of systemic risk, Financial Stability Review, December
- European Central Bank (2010), Analytical models and tools for the identification and assessment of systemic risks, Financial Stability Review, June
- Ferguson, Hartmann, Panetta and Portes (2007), International financial stability, *Geneva Report on the World Economy*, no. 9, November
- Gross (2010), Micro-data as a necessary infrastructure – Standardisation of reference data on instruments and entities as a starting point: Need for a reference data utility, paper presented at the IFC conference on initiatives to address data gaps revealed by the financial crisis, BIS, Basel, 25-26 August
- Hartmann, Straetmans and de Vries (2004), Asset market linkages in crisis periods, *Review of Economics and Statistics*
- Hartmann, Straetmans and de Vries (2006), Banking system stability: A cross-Atlantic perspective, Carey and Stulz (eds.), *The Risks of Financial Institutions*, NBER and Chicago University Press
- Hartmann (2009), The financial crisis, systemic risk and macro-prudential supervision, Keynote Address at the Cass Business School/British Accounting Association Emerging Scholars in Banking and Finance Conference on "Contemporary Issues in Financial Markets and Institutions", City University London, 9 December
- Hartmann (2010), Developing macro-prudential supervision and regulation, presentation at the Centre for Monetary and Financial Economics Conference on "Economic and Financial Crisis: Lessons from the Past and Reforms for the Future", Carleton University, Ottawa, 12 May
- Trichet (2009), Systemic risk, Clare College Lecture in Economics and Public Policy, Cambridge, 12 December