# IMF seminar on operational frameworks for the identification of systemically important financial institutions, markets and infrastructures
# Panel on methodological developments

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# Objective and problems

- The Holy Grail : ex ante measurement of the marginal contribution of a specific financial institution to systemic risk
- Different from systemic impact assessment in a crisis
- Continuous or discrete measures of systemic importance (sliding scale vs. threshold)?
- Variation over time and state dependency of systemic relevance
- How do we identify and evaluate (measure) the systemic as a herd category (indirect links)?
- Mix of quantitative and qualitative (judgement) methodologies?

# Methodological approaches to measuring firm-specific systemic relevance

- **Model-based approach**
  - CoVar (Adrian-Brunnermeier)
  - Systemic expected shortfall (Acharya et al.)
  - Distress dependency matrix/joint probability of distress (Goodhart-Segoviano)
  - Shapley value (Borio-Tarashev-Tsatsaronis)
  - IMF GFSR April 2010 Chapter 2
- **Indicator-based approach**
  - ECB methodology (2006-2007)
  - IMF paper on systemically important financial institutions, markets and instruments (2009)
  - BCBS Macroprudential Working Group (ongoing)
  - Indicators/factors grouped under:
    - Size
    - Interconnectedness
    - Substitutability
- **Network analysis**
- **Market data vs. balance sheet data**

# An indicator-based approach
# Some key issues

- Agreeing on a narrow set of indicators for measuring systemic importance
- Identifying key data gaps
- Proposing methods for aggregating indicators
- Back-testing of the indicators and aggregation approaches
- One way forward: a continuous measure of systemic importance based on a clear defined set of indicators but with an overlay of qualitative, expert judgement