

Discussion of “Measuring Systemic Risk in the Finance and Insurance Sectors”

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Important underlying idea

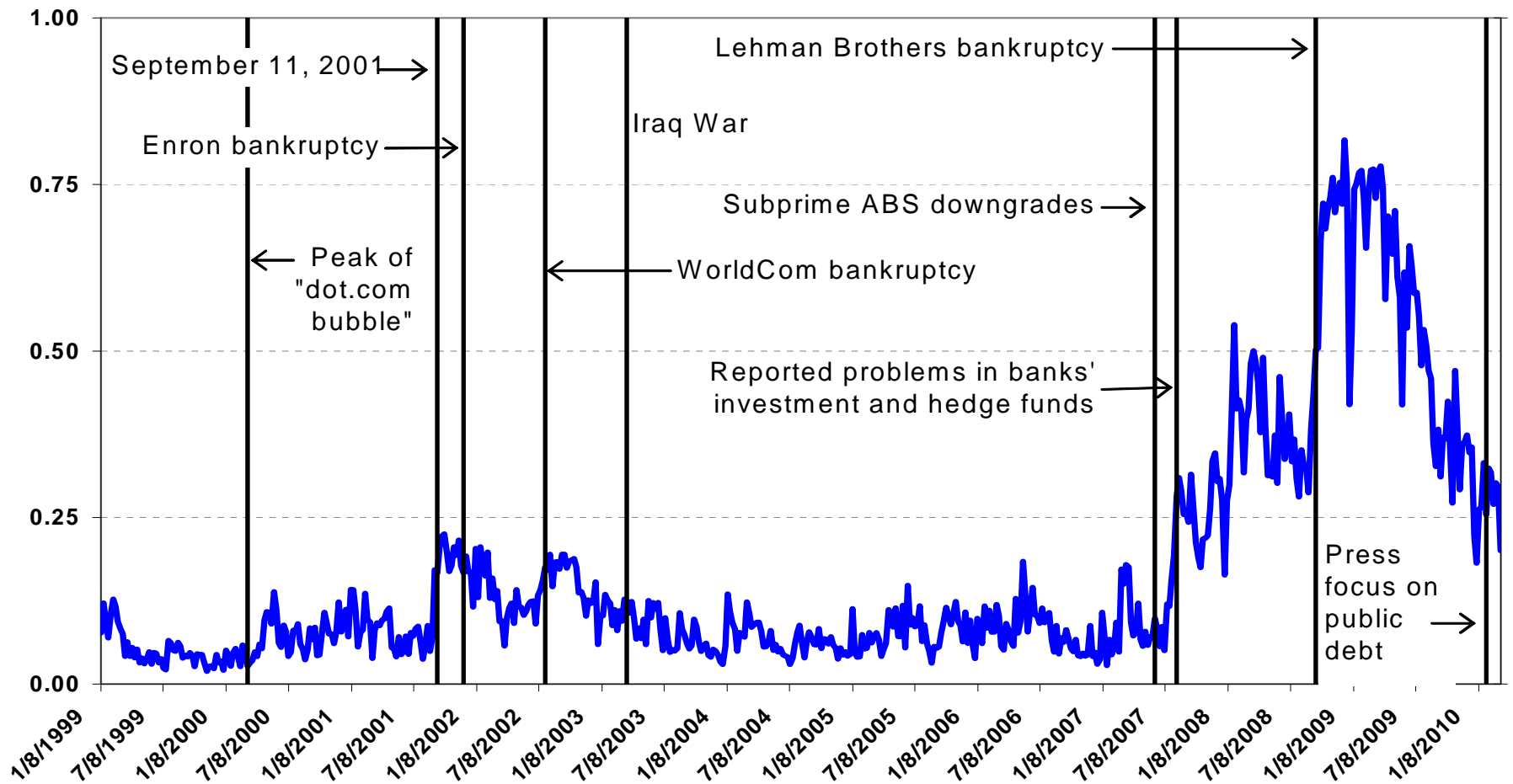
- Modern analysis of systemic risk requires to consider the role of **different types** of financial **intermediaries**
- One lesson from this crisis (cross-institution perspective)
- A crisis is more likely to be systemic if a variety of intermediaries are in distress at the same time
- Related to Hartmann, Straetmans and de Vries (2004)
 - Systemic events more severe if they relate to the malfunctioning of different types of **markets** (e.g. equity and bond markets)
 - Rather than one market benefiting from stress in another (e.g. flight to quality or liquidity; contrast to Caballero and Krisnamurty, 2008)
- First comment: Look also at other “quadrants”, one intermediary in distress and another benefits

One could go even further

- **Systemic risk**: Risk that financial instability becomes so widespread that it impairs the functioning of a financial system to the point where economic growth and welfare suffer materially (ECB 2009)
- Can involve all components of financial systems (“horizontal” perspective)...
 - different intermediaries,
 - different markets and
 - different market infrastructures

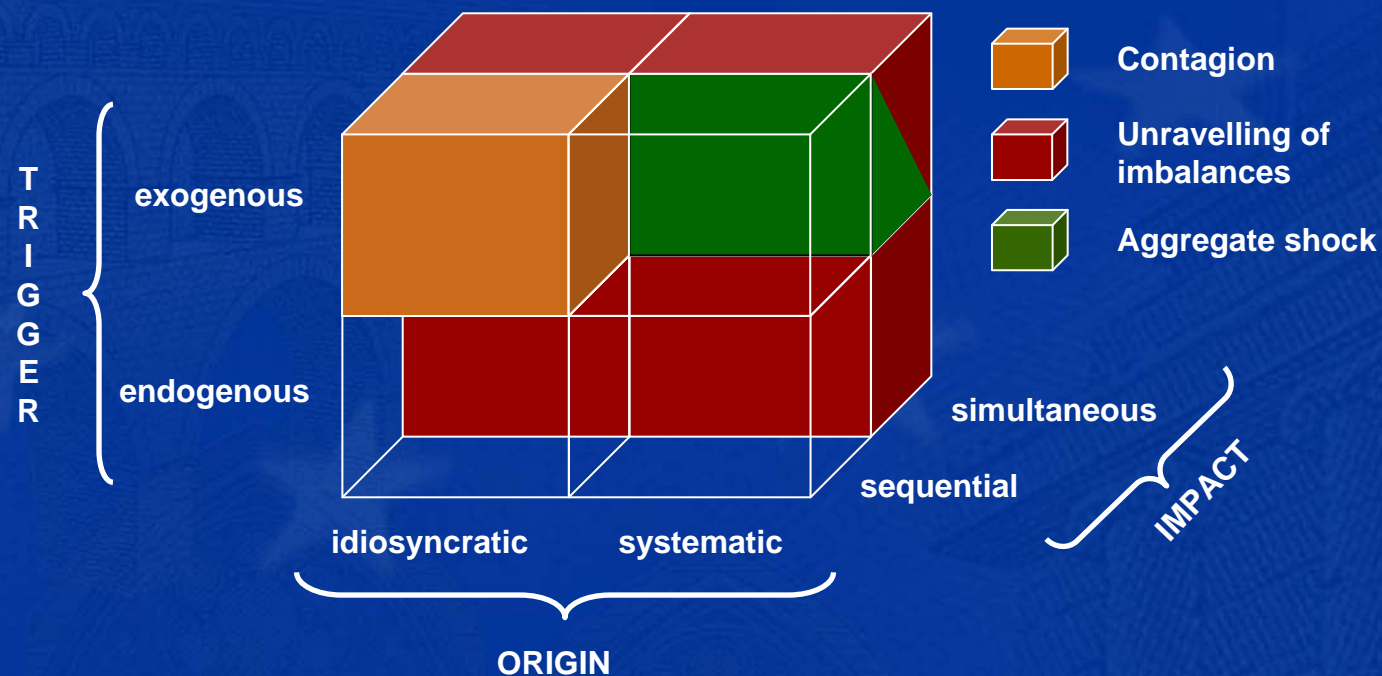
...and two-way relationship with the economy at large (“vertical” perspective; de Bandt and Hartmann, 2000)
- Latter not addressed in present paper
- Successful macro-prudential supervisor needs to monitor

Composite indicator of systemic stress (CISS)



- Scope: Equity, bond, money, FX markets and intermediaries (various sub-items) - real time
- Basic sub-measures include volatilities, trends, spreads, recourse to marginal lending (weekly data)
- Normalisation between 0 and 1 and aggregation weighted with correlations ("systemic")

Three “forms” of systemic risk: The cube



- **SR 1: Contagion** (Allen and Gale 2000, King and Wadhvani 1990)
- **SR 2: Endogenous build-up and unravelling of widespread imbalances** (Minsky 1977, Kindleberger 1978)
- **SR 3: Aggregate shocks** (Gorton 1988, Demirgüç-Kunt and Detragiache 1998)

Analytical tools for identifying systemic risks

- Framework of different approaches to detect and assess the different “forms” of systemic risk (ECB 2010)
 - 1) Contagion: **Contagion and spillover models** (e.g. simulations, flow-of-funds analysis, market return analysis)
 - 2) Build-up of widespread imbalances: **Early-warning signal models** (e.g. credit-to-GDP gaps or leverage) and forward looking financial stability indicators
 - 3) Aggregate shocks: **Macro-stress testing models, principal components analysis, tail- β s** (Hartmann et al. 2006, Straetmans et al. 2008)
- Identification of systemic crises (and historical analyses): Composite coincident indicators (e.g. ECB “CISS”)
- Comment: For policy it is useful to identify “forms” and distinguish crisis identification from early warning

Insurance and systemic risk

- Paper finds that evidence that there are relevant spillovers from insurance companies to banks, brokers and hedge funds
- Most well known example: **AIG** in the crisis
- But there is some controversy about whether they should be within the macro-prudential perimeter
 - Geneva Association (2010): **AIG** was special, credit insurance could be split off
 - ECB/Trichet (2009): Size, interconnectedness and complexity justifies inclusion in macro-prudential scope
 - International Association of Insurance Supervisors (2010): Somewhat between the two
- My view: Needs to be included in macro-prudential perimeter, at least to limit regulatory arbitrage

Hedge funds and systemic risk

- Paper finds relatively consistently that they are more the victim of contagion and spillovers rather than the source
- Conventional wisdom on the crisis: Hedge funds did not play any significant role this time
- But is this proof that they can remain outside the new supervisory and regulatory perimeter?
- This is not implied, despite the above two points
- Hedge fund sector could still contribute to the pro-cyclicality of the overall financial system
- Some HFs Granger cause some other intermediaries (5.5)
- Better collect more detailed and reliable data (see e.g. Squam Lake Group)
- This is not identical with more regulation

Other points

- **Need theory to understand better what the data show**
- **Interpretations of movements in systemic risk indicators could be strengthened by a number of targeted tests**
- **Weaknesses of correlations and regular returns (some “crises” not so clear), but regime-switching and non-linear Granger causation (but logistic parameterisation)**
- **Miss-pricing and sentiment issues in market returns**
- **Why don't the data include 2009? What do systemic risk measures show 2 or 3 quarters after Lehman? Non-US data?**
- **What do we make of the following two companies being in the very top group of systemically important institutions**
 - **Progressive Corp. (automobile insurer)**
 - **W.P. Stewart & Co. (asset manager)**

**Thank you for your attention and for
the opportunity to discuss this paper!**

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Annex

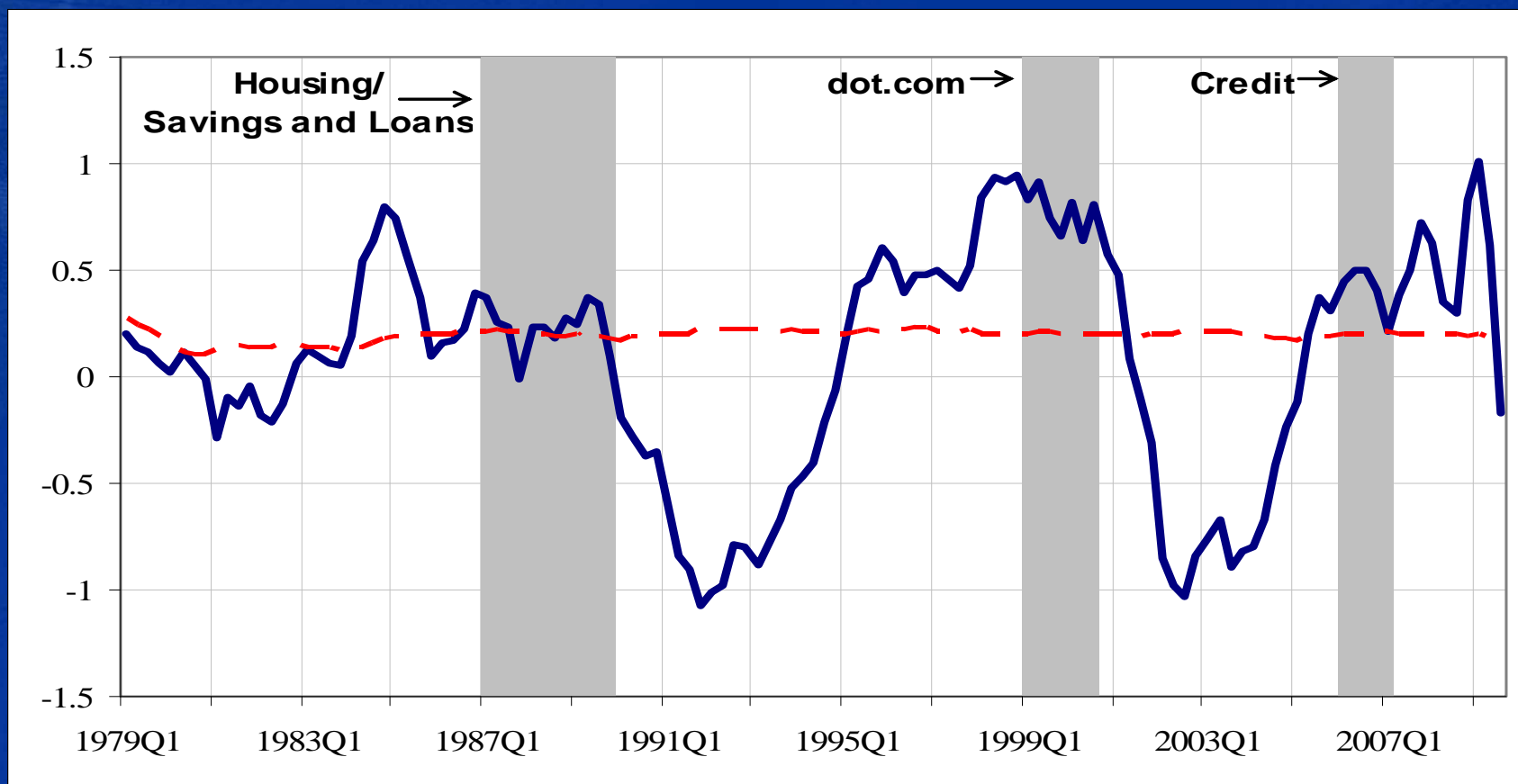
Past and present view on systemic risk

“**Systemic risks** are for financial market participants what Nessie, the monster of Loch Ness, is for the Scots (and not only for them): Everyone knows and is aware of the danger. Everyone can accurately describe the threat. Nessie, like systemic risk, is omnipresent, but nobody knows when and where it might strike. There is no proof that anyone has really encountered it, but there is no doubt that it exists.”

Sheldon and Maurer (1998)



Credit gap as EWI for “costly” asset bubbles



- — De-trended private credit to GDP ratio (GDP-weighted average across countries)
- - - - “Optimal” signal threshold (each time 70th percentile – “quasi” real time)
- ■ Widespread mortgage/equity bubble episode (≥ 8 countries 1.75 SD above trend)
- “Costly” bubbles (followed by 3 years of GDP growth 3 p.p. below potential)

Early risk warnings

- **General problem: Hard to predict crises**
- **Lesson from this crisis: Warnings were not heard/too weak**
- **General public/markets or among policy authorities**
- **Intermediate goals**
 - **Change market behaviour**
 - **Encourage preventive policy action**
- **Challenges for public warnings**
 - **Type I errors (false alarms): Endanger credibility for next time**
 - **If warnings are successful in changing market behaviour then crises may not be observed (difficulty to ascertain counterfactual)**
 - **Type II errors (missed crises): Mandate not fulfilled**
- **“Art” to make communication effective**

Research needs

- **Financial stability/systemic risk indicators (continuous effort)**
- **Contagion and spillover models**
 - Incorporate endogenous reactions of market participants/amplification mechanisms
 - Distinguish contagion from unravelling of imbalances
- **Early-warning signal models**
 - Increase precision/reduce standard error in predictions
 - Europe: Aggregation of different models/indicators for countries with different financial structures
- **Macro-stress testing models**
 - Make more consistent
 - Use frameworks that have two-way interaction between financial system and wider economy

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