

Sovereign Credit Default Swaps: Functions, Importance and Information Content

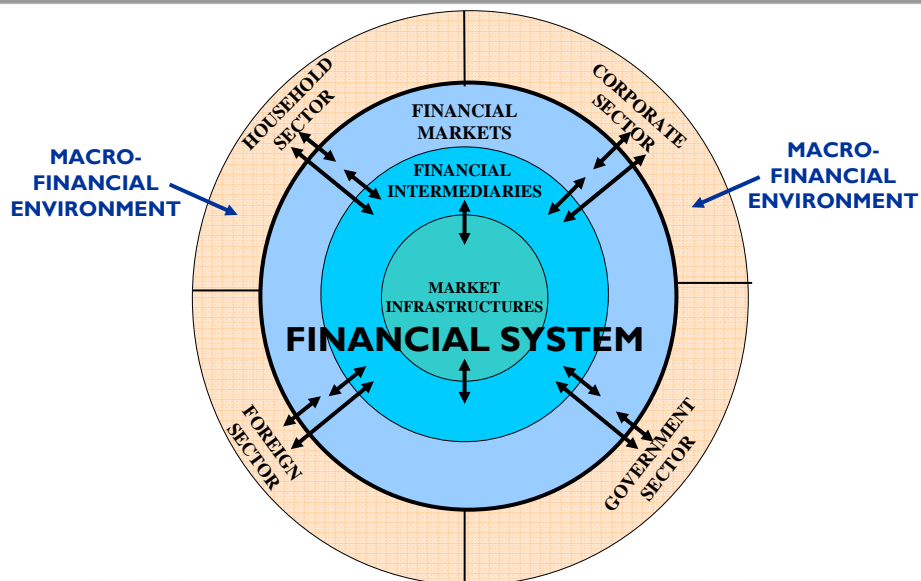
Dawid Żochowski
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65th East Jour Fixe
Credit Default Swaps – Blessing or Curse?
Vienna, 28 September 2009

Disclaimer: Views and theses expressed in this presentation are those of the author and not necessarily represent the official standpoint of the institution he represents.

Financial stability analysis

The macro-financial environment and the financial system



Financial stability analysis

A three step process

- (1) Assess the robustness of the financial system (including endogenous sources of risk)
- (2) Identify the main sources of (downside) risk and vulnerability to financial stability (exogenous risks) and assess their probability
- (3) Given (1), assess the ability of the financial system to absorb the sources of risk and vulnerability identified in (2), should they crystallise

Outline

- Overview of the CDS market and its functions / risks from a financial stability perspective
- Information content of CDS spreads of euro area banks
- Sovereign spreads and its drivers in the post Lehman world
- Conclusions and some policy implications

Overview of the CDS market: Size, functions and risks

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CRT markets generally contribute positively to financial stability

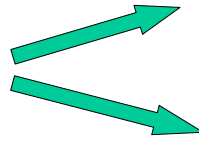
- They facilitate the **distribution of risk** across a wide range of investors
- They offer **new investment opportunities** (exposures to names or sectors not present on the corporate bond market)
- They facilitate broader **portfolio diversification**
- and it enable a **better risk management** (short positions in credit exposure allowing hedging of the overexposure to particular names or sectors)

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...however they also pose some risks to the financial system and its institutions

- Counterparty credit risk
 - Replacement risk
- Jump-to-default risk
- Liquidity risk
- Correlation risk
- Model risk
- Wrong-way risk
- Reputation risk



Risk management

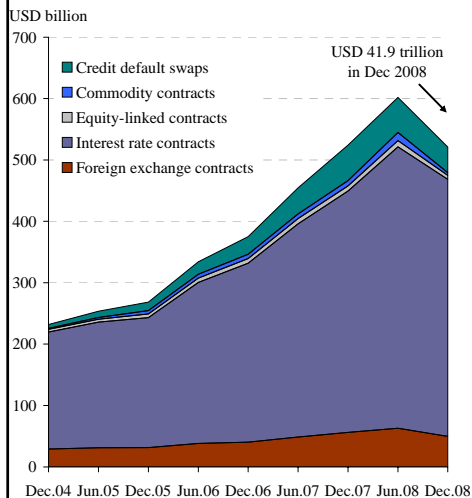
All these risks should be managed on the level of each CDS market participant

Risk detection and mitigation

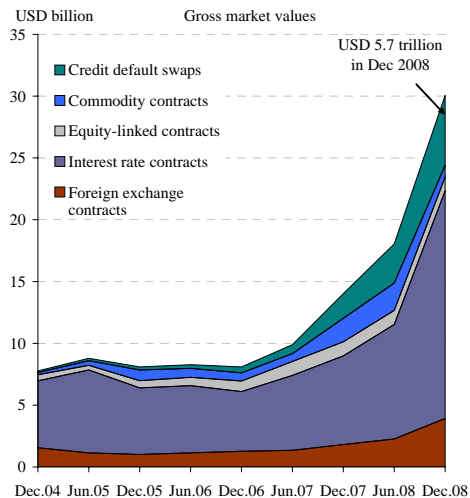
Supervisory authorities and central banks should identify risks of systemic importance and implement mitigating measures to avoid its materialisation and assure that risk management tools and practices at institutions participating in the CDS market are adequate

Activity and the relative size of risks in the OTC derivative market

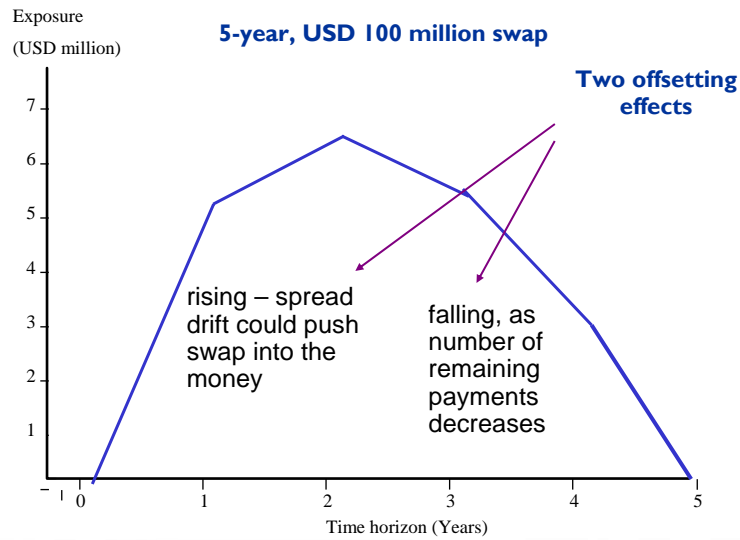
OTC derivative market activity: Notional amounts outstanding



OTC derivative market risks: Gross market values



Counterparty Credit Risk 'Current/Potential future exposure – PFE'

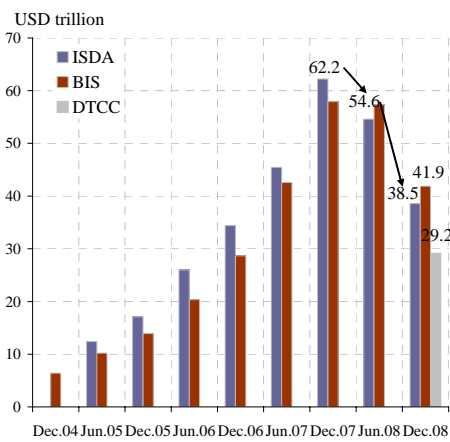


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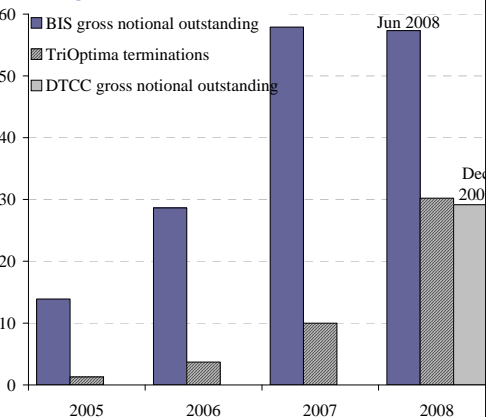
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In 2008 the CDS market decreased for the first time in history due to terminations of the contracts

Notional amounts outstanding Various data providers



Notional amounts outstanding and multilateral terminations via TriOptima services



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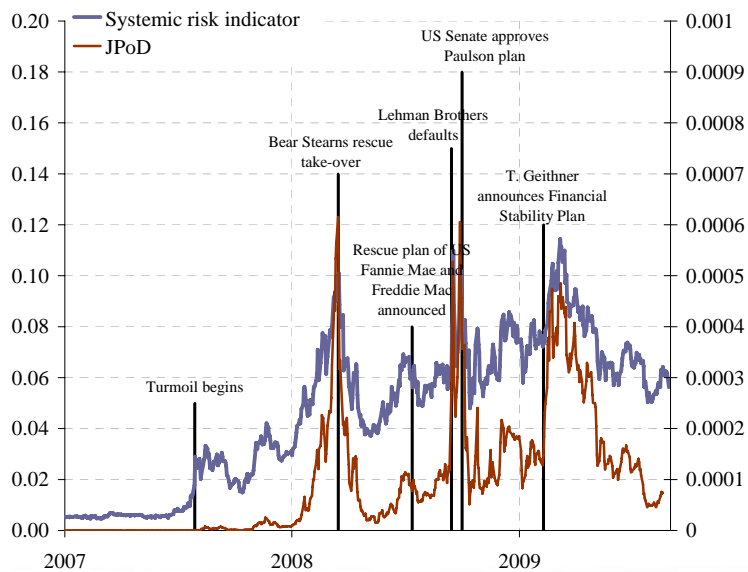
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Information content of CDS spreads: Euro area banks example

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CDS spread based systemic risk indicators

Proved to be useful in the assessment of systemic risk problems

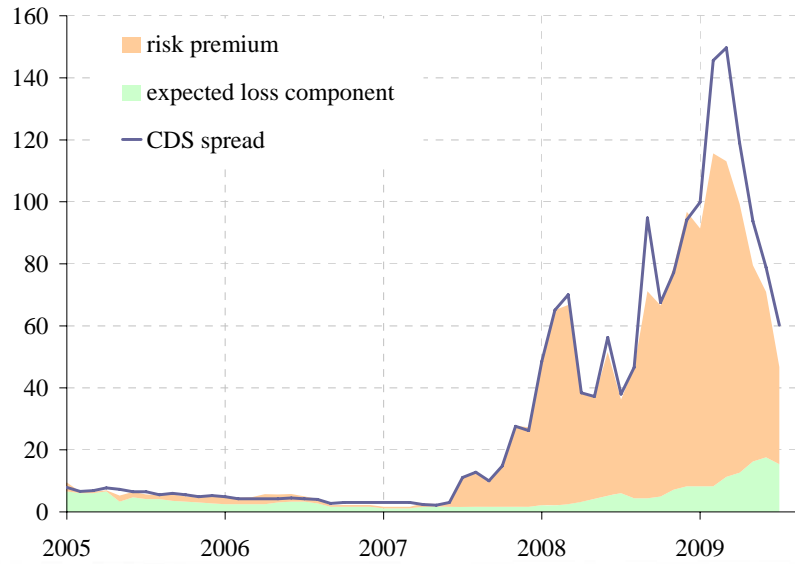


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Decomposition of euro area banks CDS spreads

Risk premium has been the major driver

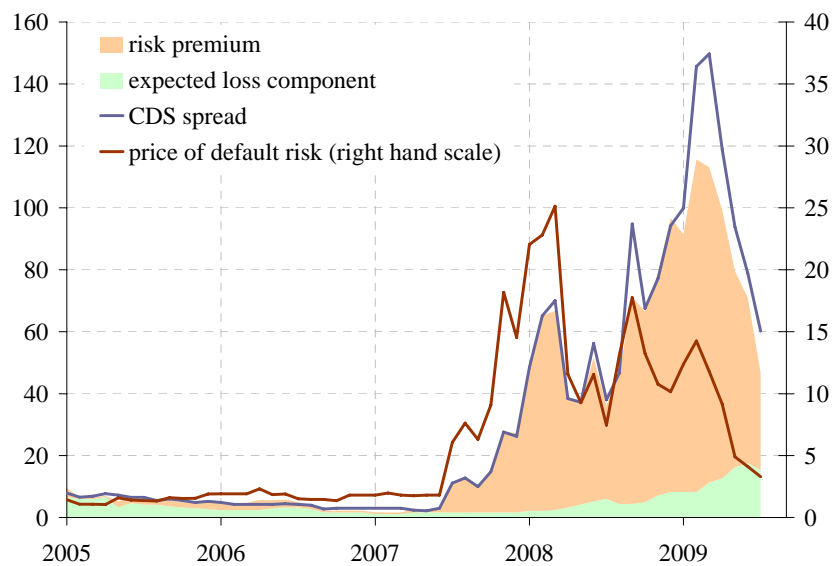


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Decomposition of euro area banks CDS spreads

Price of default risk the highest in the first phase of the sub-prime meltdown



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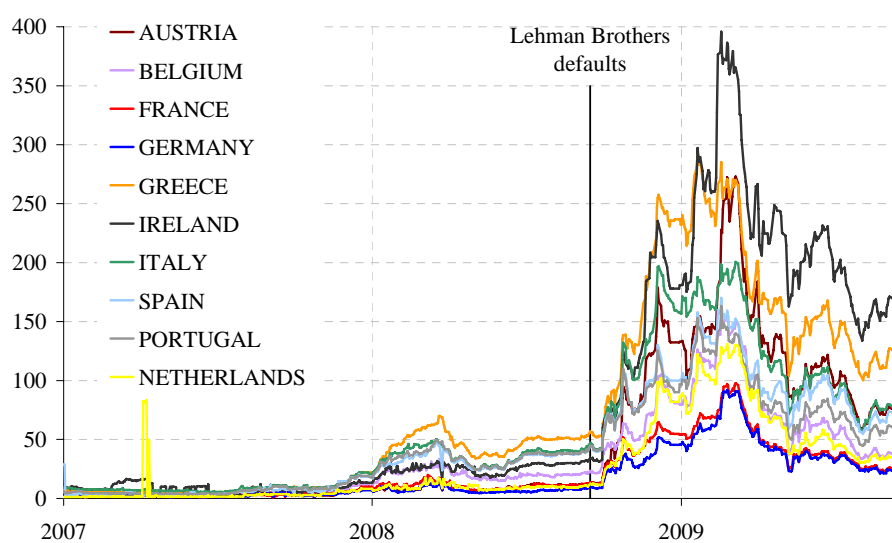
Sovereign spreads and its drivers

“We leave now in a different world
– a post Lehman world”

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Euro area countries sovereign spreads

Lehman default had an impact on an unprecedented scale

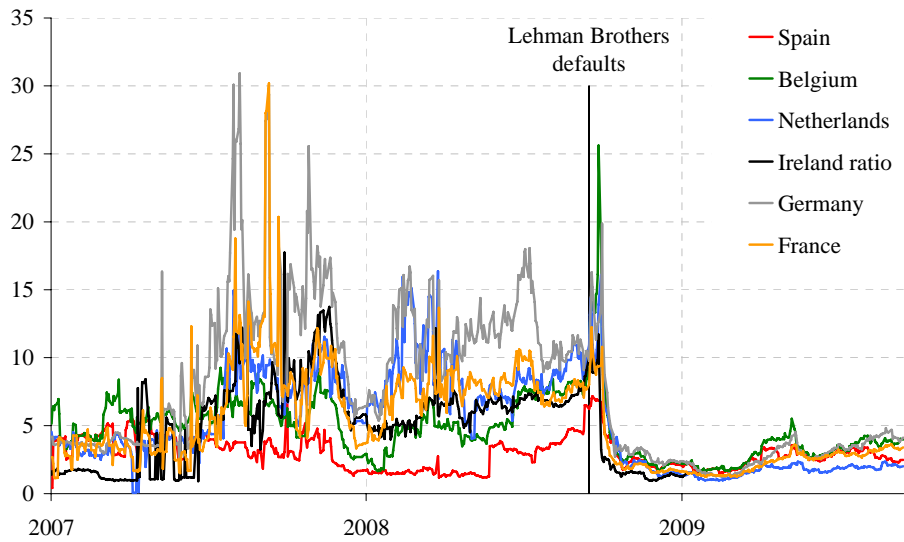


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Linkage between banks and sovereign spreads

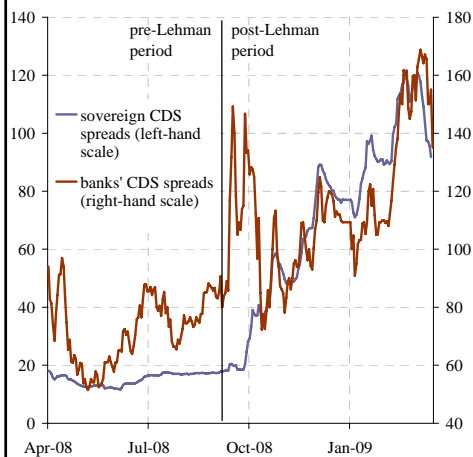
Ratio of median bank spread to sovereign spread by country



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Linkage between banks and sovereign spreads

Possible explanations

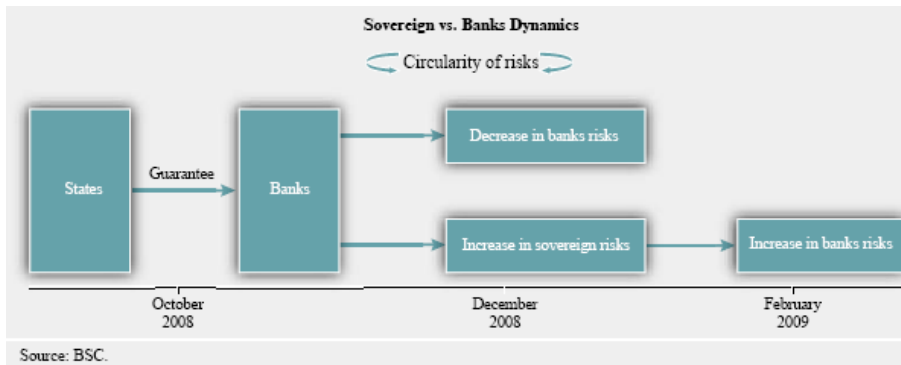


- Risk transfer from financial sector to public sector (support schemes and other measures for banks)
- Adverse feedback between government and bank spreads via support ratings
- Bivariate time-series framework
 - after Lehman government CDS spreads reacted to bank CDS spreads

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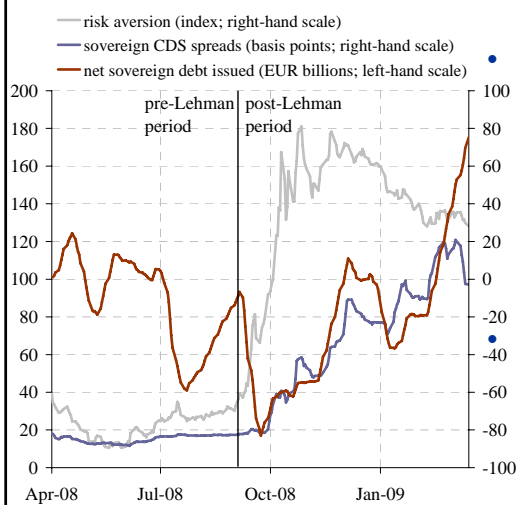
Linkage between banks and sovereign spreads

Circularity of bank and sovereign risk



Linkage between banks and sovereign spreads

Addressing the feedback loop



- **VAR framework with several determinants of government debt:**

- Investor sentiment
- Government bond yields
- New gov. debt issuance
- euro area banks spreads

- **Response of sovereign spreads to a unit shock of bank CDS spread confirmed spiralling hypothesis from the bivariate setting**

CDS market report



**Credit default swap and counterparty risk,
August 2009**

**Banking Supervision Committee Task Force
composed of representatives of
several EU central banks and supervisory
authorities**

Available on the ECB webpage



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Interconnectedness in the CDS markets

- **Increasing correlation between counterparties and reference entities (sovereign and banks spreads) => an extreme case of wrong-way risk: CDS sold by banks on their host sovereign reference countries**
- **Counterparty risk- dealers and other financial institutions are tight to each other through chains of OTC derivative contracts – difficult for investor to separate the credit risk from pure counterparty risk**
- **The AIG case – market participants which were not perceived systemically important in terms of gross notional amounts proved to be too large or too interconnected to fail**
- **Concentration increased => interconnectedness, too**

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The main findings of the report

From a systemic risk perspective to be considered by regulators and researchers

- **Transparency**
 - Extended disclosure on counterparty, including indicators of counterparty concentration exposure
 - Public disclosure: The most active institutions could regularly disclose their total gross notional amounts and gross market values for bought and sold CDS, as well as net market values for uncollateralized derivative transactions
 - information regarding CDS prices remains a challenge for non-dealer market participants
- **Further research necessary**
 - Investigate further possible negative feedback effects (role of CDSs in the cost of firms' funding, in corporate and EU government bond markets as well as the linkages between the equity and credit markets)
- **The establishment of CCPs**
 - CCPs should operate under appropriate supervisory oversight
 - they should have sound corporate governance
 - and robust risk management practices.

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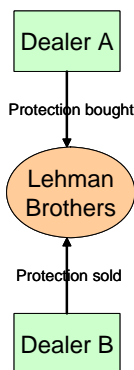
Annex

Lehman default - a real time test for the CDS market

The market has proved to be resilient so far...

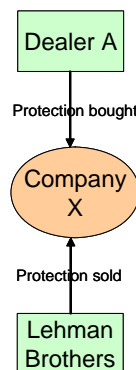
CDS trades with Lehman Brothers as counterparty and as entity name

Lehman as entity name



Notional: USD 400 billion
Net expos.: USD 5.2 billion

Lehman as counterparty



USD 729 billion

- Lehman Brothers, which had USD 600 billion of assets, had USD 729 billion in derivatives trades

- In view of Lehman possible default on 14 Sept. ISDA had organised special trading session to reduce dealers' counterparty risk arising from CDS contracts with Lehman
- Lehman settlement, which took place on 20 October, resulted in payments of \$5.2 billion on the notional value of CDS contracts of about 400 billion in CDS

- Although some market participants have faced major losses, it did not cause any disruptions in functioning of the CDS market

Financial stability publications

Financial Stability Review
Semi-annual (June, Dec.)
Euro area focus
Various data sources



EU Banking Sector Stability
Annual (October/November)
EU focus
Consolidated Banking Data
(and other data sources)



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