

IIF Insurance Colloquium - 22-23 Sept. 2016 Basel

SESSION 9: THE FINANCIAL MARKETPLACE CROSS-SECTORAL REGULATORY SPILLOVERS

**"How can insurers be systemic for banks;
how can banks be systemic for insurers?"**

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The ideas expressed in this paper are the ones of the authors and do not necessarily reflect the opinion of the Autorité de contrôle prudentiel et de résolution

Introduction

- ❑ Cross-sectorial regulatory spillovers depend closely on the regulation and measurement tools implemented

- ❑ The IAIS stated in 2011 that insurances companies can have an impact on the overall financial system because:
 - ❑ insurance groups and conglomerates can be engaged in non-traditional (NT) or non-insurance (NI) activities that make them more vulnerable to financial markets
 - ❑ insurers are connected to the broader financial system and are thus exposed to the same risks than the other financial institutions

- ❑ These are the two direction on which we will build a presentation

Outline

1. Implications of the BCBS and IAIS methodology for assessing SIFIS
 1. Accounting VS prudential scope of consolidation
 2. Expected impact approach VS activity based approach
 3. The merits of the conglomerate approach

2. The tools available to measure interconnectedness
 1. Metrics based on market data
 2. Analysis based on French prudential data
 3. The data gap initiative

Part 1

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1.1. The accounting scope of consolidation

- ❑ The universe of possible GSII is any insurance group:
 - ❑ with a total asset of 200 €Bn (60 Bn if international activity is more than 5% of premiums)
 - ❑ to the exclusion of GSIB banking subsidiaries

- ❑ Indicator apply to the combined items like assets, liabilities, equity, income, expenses and cash flows of the parent with those of its subsidiaries

- ❑ eliminate in full intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between entities of the group

- ❑ The systemicity of banking subsidiary is taken in full in the size and related indicators of their parent insurance group

1.1. The prudential scope of consolidation

- ❑ The universe of possible GSIB is any bank, which has not a banking parent, and overpasses a total exposure of 200 €Bn

- ❑ Total exposure measured according to the prudential scope of consolidation designed to exclude insurers from the capital requirement calculation
 - ❑ which is not suited for them
 - ❑ Which are subject to their own capital requirements

- ❑ The activity of insurance subsidiaries is limited to:
 - ❑ In many jurisdictions, only the net equity of the insurance subsidiary is included in the size of the banking group
 - ❑ any intragroup exposures between a banking group and its insurance subsidiary are captured in the reporting of interconnectedness and complexity.

- ❑ So far, the systemicity of insurance subsidiaries for their parent banking group owes to intragroup activity

1.2. The expected impact approach

- According to BCBS “global systemic importance should be measured in terms of the impact that a bank’s failure can have on the global financial system and wider economy, rather than the risk that a failure could occur.
- This translate into the following formula $LGD_{GSIB} * p(kr + k_{GSIB}) = LGD_r * p(kr)$
- This focus on impact contrary to risk and implies a strict discipline in the selection of indicators:
 - Size is weighted up to 20% in the banking methodology
 - Several indicators such as intra-financial exposures, are closely coreleted to size

1.2. Toward an activity based approach?

- ❑ the non-traditional non insurance (NTNI) indicators (or those which could replace them in a revised methodology) select activities that may cause particular risks to the insurance group
- ❑ GSII methodology magnifies banking activities because :
 - ❑ these activities are heavily weighted in the scoring methodology: 37.5% as NTNI plus 40.2% as interconnectedness while the corresponding indicators correspond to 33.5% in the banking methodology
 - ❑ the corresponding scores are market shares in the limited universe of the insurance groups alone
 - ❑ On the contrary, size is limited to a 5% weight
- ❑ The recent interest in literature for an activity based approach would put a larger emphasis on risk VS impact

1.3. The merits of a conglomerate approach

- ❑ a financial Conglomerates is any group of companies (...) which conducts material financial activities in at least two of the regulated banking, securities or insurance sectors
- ❑ The principles for supervision of FC states that Supervisors should require that the financial conglomerate:
 - ❑ 15(i) maintains adequate capital on a group-wide basis to act as a buffer against the risks associated with the group's activities; (...)
 - ❑ 15(iii) considers and assesses the group-wide risk profile when undertaking capital management
- ❑ A possible framework to aggregate own funds and possibly buffer/HLA discussed by BCBS and IAIS; not a tool at this stage to assess the systemicity of conglomerates on an harmonized basis

1.3. The implementation in Europe

- ❑ Directive 2002/87/EC and Commission delegated regulation n° 342/2014 of 21 January 2014 currently in the process of revision

- ❑ Trans-sectorial aggregation rules for own funds and capital adequacy requirements are fully defined. However:
 - ❑ no provision is made at the on or off balance sheet level, which is the foundation for SIFIS scoring methodology
 - ❑ some activities may be deducted from the capital adequacy requirements if the corresponding own funds are deducted. This ensures an appropriate coverage of the risk but not an appropriate measurement of the full size of the conglomerate.

- ❑ Capital adequacy requirements are calculated separately for each sector and added:
 - ❑ this takes into account requirements for non-regulated sector but does not take into account possible combined risks of the sectors, in case they are higher or lower than the sum
 - ❑ for the sole criterion of the size, a banking group and an insurance group may be separately under the threshold for being a SIFI, but their sum may overpass the threshold.

Part 2

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2.1. Metrics from public market data

- ❑ CoVaR (fragility) and Δ CoVaR (importance) :
 - ❑ In Bernal et al (2014) relying on daily market returns the banking sector appears to be systemically riskier than the insurance industry

- ❑ Granger causality tests
 - ❑ Billio et al (2014) show that banks play a much more important role in transmitting shocks than other financial institutions

- ❑ Systemic expected shortfall
 - ❑ Acharya et al (2016) find that insurance firms are overall the least systemically risky, compared to Depository institutions, Miscellaneous non-depository institutions including real estate firms, and Security and Commodity Brokers.

- ❑ Precursor analyses based on market data show some limitation for supervisory purposes:
 - ❑ For institutions which are partially listed or not listed at all
 - ❑ When market expectations are biased

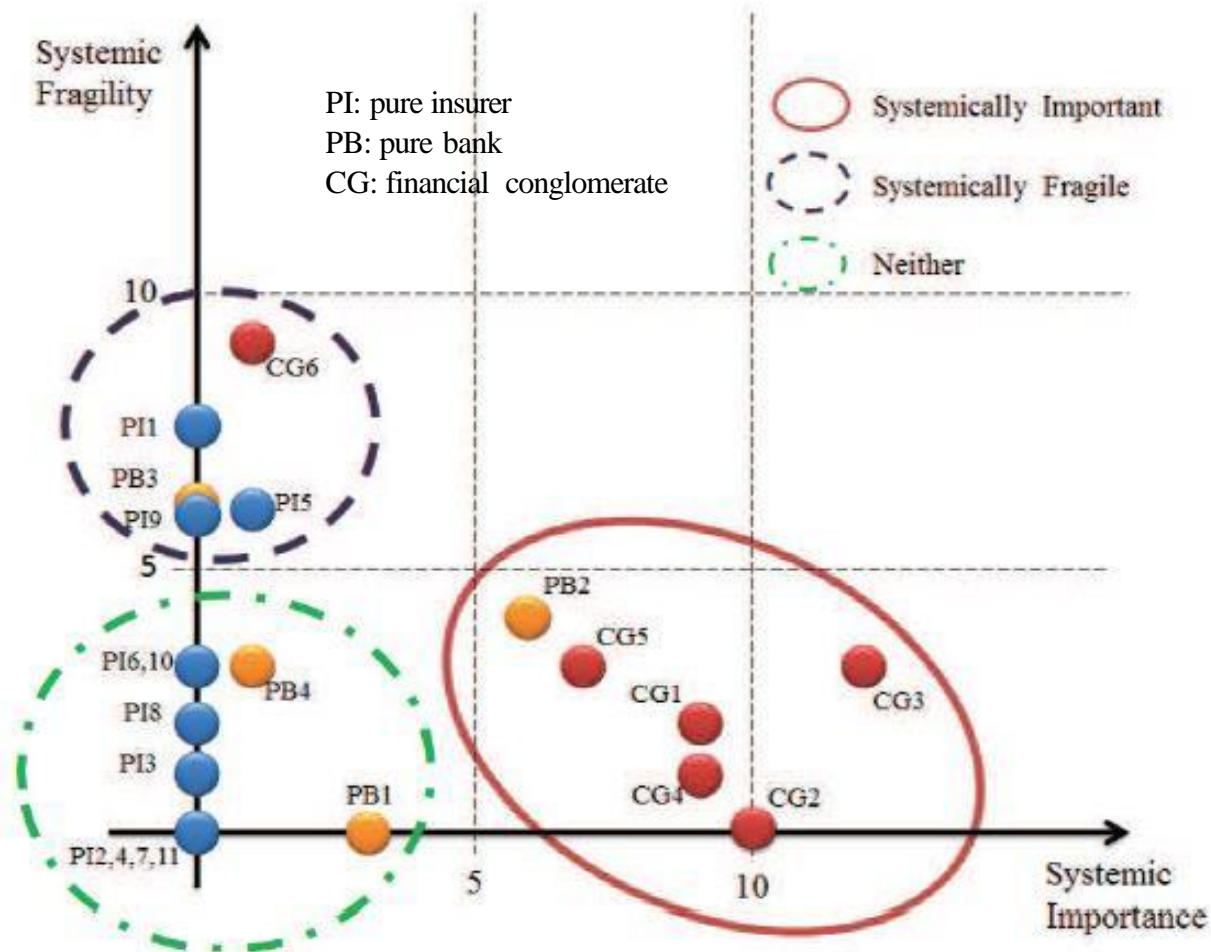
2.2. Measures from French prudential

- ❑ Hauton and Heam (2014) document interconnections between 21 French financial institutions: 6 conglomerates, 4 pure banks, 11 pure insurers

- ❑ The exposure matrices are built on regulatory reports on "Large Exposures" for banks and security-by-security reports for insurers.
 - ❑ This include on-balance sheet exposures composed of shares securities, equity investments, loans, debt securities,
 - ❑ Reinsurance data are not taken into account in this study.
 - ❑ For insurers, only exposures of French subsidiaries are reported.

- ❑ Concepts in order to measure systemicity :
 - ❑ Systemic importance of institution X: the number of institutions that lose more than 10% of initial equity due to institution X's default.
 - ❑ Systemic fragility of institution X : number of scenarios where institution X suffers from losses larger than 10% of its initial equity when some institutions of the network default.

2.2. Measures from French prudential data



Source: ACPR data, authors' computations.

Note: The default of CG1 leads 9 other institutions to lose more than 10% of their equity. Only two institutions through their defaults generate losses for CG1 higher than 10% of its equity.

2.2. Overcoming data limitations

- ❑ Limitation due to instruments covered:
 - ❑ Previous research exclude reinsurance which may prove a loophole in a network including insurers
 - ❑ Frey et al (2013), using regulatory data on 22 insurance groups formed with French insurance entities and 9 groups of international reinsurers: no insurer would become insolvent consecutively to the default of all reinsurers.

- ❑ Limitations due to geographical scope:
 - ❑ The larger the geographical scope the smaller the loophole due to cross-border exposures
 - ❑ At the European level, Alves et al (2015) perform a network analysis of the 29 largest EU insurance groups
 - ❑ The sum of all the top ten exposures to banks, insurers and other financial institutions for all instruments, reported by the 29 insurance groups, represents about 10% of total assets of the insurers, suggesting a low level of concentration.
 - ❑ Performing a distress simulation, the authors find that none of the 29 insurers, neither the banking counterparties can cause an insurer of the network to default.

2.3. The data gap initiative

- ❑ Following the G20 recommendations, the FSB launched the “Data Gaps Initiative” in 2009 to fill some “gaps” in informations available to supervisors:
 - ❑ In 2013, around 30 GSIBs, report their exposures to their top 50 counterparties at weekly frequency to their 10 national authorities.
 - ❑ In 2015, the data collection was extended to the liability

- ❑ The “International Data Hub” hosted by the BIS gathers this information to get matrices of bilateral exposures between GSIBs, and identify concentration risk

- ❑ Having a similar data collection for GSIBs and crossing data from the banks and insurers would be a major step further however:
 - ❑ While including reinsurance operation would be helpful, none of the reinsurers are GSIBs at this stage,
 - ❑ experience has shown that implementing such data collection for banks has been a challenge, especially due to the high frequency of reporting

Conclusion

- ❑ The more global the information, the more efficient the measurement of global systemic risk:
 - ❑ The conglomerate framework provide principles for sound trans-sectorial aggregation rules for own funds and capital adequacy requirements but not for exposures at this stage
 - ❑ The larger the data collection on bilateral exposures between financial institutions in terms of instruments and geographical scope, the better the network analysis to avoid any loophole

- ❑ However, the challenges to attain such ideals are not to be underestimated:
 - ❑ So far the conglomerate framework had little concern about exposures needed for systemicity indicators
 - ❑ The technical and conceptual challenges in collecting information on bilateral exposures are high e.g. how to measure reinsurance exposures with non proportional reinsurance? Is the weekly data collection feasible?.....