Seminar: The International Expansion of Financial Conglomerates

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Session 6 – Background Note: The Work of the IMF on Financial Conglomerates[1]

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SUMMARY

The work of the IMF on financial conglomerates (FC) is tailored to national characteristics and data availability. There is not a systematic approach. This has to be this way given the idiosyncratic nature of FCs in each jurisdiction, which does not facilitate developing a widely accepted and comprehensive analytical framework. In addition, data on FC is scarce and not systemically collected, also because of this idiosyncratic nature.

FSAP's findings and recommendations are the most common backbone of IMF's surveillance and technical assistance work on FC.[2] FSAP follows two main approaches:

(i) The supervisory approach, based on sectoral standards on consolidated supervision and the Joint Forum Principles for the supervision of FC.
(ii) An incipient body of analytical tools, including stress testing techniques and systemic risk analysis.

FSAP work is conducted as part of IMF's macrofinancial (bilateral) surveillance activities. Stress testing methodologies applied in FSAPs are well developed and they are commonly used to quantify risks at the level of individual institutions. Ongoing work aims to capture special risks originated in conglomerates and the extent to which conglomerate structures exacerbate vulnerabilities in financial systems. On the other hand, from a multilateral perspective on IMF activities, the GFSR has still to deal with FCs.

Since the effects of conglomerates on financial stability are largely unknown and uncertain, the IMF follows closely FC developments in individual countries, and is currently strengthening its analytical frameworks to assess FC-related risks.

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[1] The views expressed in this note are those of the author only, which may not necessarily represent those of the IMF. Please check also against delivery.

[2] To learn more about the IMF's Financial Sector Assessment Program (FSAP), please visit: https://www.imf.org/external/np/fsap/fsap.aspx. This webpage also provides examples of country specific analytical work related to FCs that have been published.

FINANCIAL CONGLOMERATES ARE IDIOSYNCRATIC IN THEIR NATURE

This idiosyncratic nature poses challenges to IMF work on FCs. Financial conglomerates are different in terms of structure, size, range of activities and complexity. Dissimilar structures have been shaped among others by legal reasons, tax purposes, and historical factors. As financial conglomerates expand their size, complexity, and add more financial and non-financial activities, this also often adds to their uniqueness. In addition, we have the increasing trend of the international expansion of financial conglomerates discussed in this seminar.

It is not infrequent that financial authorities cannot easily define and explain the limits of FCs acting in their jurisdictions. Varying definitions of financial conglomerates or banking groups are present across countries or there is a lack of a definition altogether. Not all countries have a legal or explicit definition of a financial conglomerate, but in some cases there is still an operating definition used in supervisory procedures. In the countries that have explicit definitions these vary in terms of what constitutes a financial institution or when groups would be constituted financial conglomerates. For example, insurance or pension funds in one case are not defined as financial institutions. Different legal definitions complicate the perimeter of consolidated supervision, in particular those of internationally active groups. Furthermore, similar activities may have a different legal consideration as financial or non-financial activity in different jurisdictions.

Another important driver to shape the idiosyncratic nature of FC is the legal power of financial authorities to supervise all or part of financial conglomerates. Who does what and with what scope may present clear gaps and grey areas. Supervisors of conglomerates and their business units varies widely, and is not infrequent that financial activities remain unregulated and out of financial authorities' knowledge and control. Coordination among three sectors (banking, securities and insurance) is not always straightforward, regardless of its supervisory structure, whether a single agency or different ones.

Some additional structural features reinforce the idiosyncratic nature of FC. For example, in many cases FC are also "too-big-to-fail" (domestic systemically y important financial institutions). Also, in many cases, financial activities are mixed with industrial and commercial activities, given rise to the so-called mixed conglomerates, which present a different set of conglomerate risks, conflict of interests, data problems, etc. Non-financial activities may vary widely and include activities such as mining, transportation, processed foods, real estate, hospitals, education and retail. The structure of mixed-activity groups not only can inhibit analysis but also effective supervision.

ANALYSIS OF FCS IS SERIOUSLY LIMITED BY SCARCE DATA

IMF's work on FCs faces the global issue of inconsistent and incomplete data. Linked to the idiosyncratic nature discussed before, data reporting tends to be derived by sectoral regulation and thus it is not easy to come up with comprehensive data with consistent definitions. Data may be available for single FCs, although frequently incomplete given unclear definitions around FCs.

In addition, legal barriers and limitations to collect and share data among the authorities compound the problem. Access to information about the entities that form FC is unequal. Quality information is the basic ingredient for a sound analysis. Supervisory authorities usually have unrestricted access to its regulated entities and they can work based on this. Information about regulated financial entities from a different sector in the same conglomerate is generally more challenging, but accessible. Information about individual entities abroad demands MoU. The opaquest entities of conglomerates are non-financial unregulated institutions.

FSAP teams dig around in different places in search for data to conduct their work with different levels of success.

A STRUCTURED ANALYTICAL FRAMEWORK FOR FCS IS STILL PENDING

Globally, the international community is missing an undisputable taxonomy and analytical framework for financial conglomerates. Unregulated institutions, group interrelations, activities with related parties, non-financial risks in mixed conglomerates are among the main obstacles to develop a well-structured analytical framework that can be used by financial authorities across jurisdictions.

The Fund is not an exception. Fund staff are developing interconnectedness, spillovers analysis, assessment of consolidated supervision, etc.— all of this is good; however, there is not conclusive guidance to our work on FCs. FSAP teams make recommendations with due consideration of the international standard of the most relevant financial sectors (usually banks). FSAP teams exploit the advantages of synergies among their members, which are complemented by lessons learned in other cases where FC were dealt with to guide our work in these mostly unchartered waters.

There is not yet a clear map from conglomerate risks to recommendations. FSAP approach is to identify the main risks posed by financial conglomerates and present a tailor-made approach to the analysis depending on what is available. Emphasis is normally put on cross sectoral and cross border spill overs, and the effectiveness of consolidated supervision.

Therefore, FSAP work on FC is two-pronged: a supervisory approach and an analytical approach. Both are succinctly introduced below.

IMF'S SUPERVISORY APPROACH

In Latin America, large and complex financial conglomerates dominate financial systems in many countries. Group-wide supervision is an essential part of FSAP work to deal with financial conglomerates. In September 2012, the Joint Forum published its revised *Principles for the Supervision of Financial Conglomerates*[3] that guide this work and took into account updates and developments in the frameworks of the BCBS, IAIS and IOSCO. The Principles should be applied on a group-wide basis to a financial conglomerate, which is defined as "any group of companies under common control or dominant influence, including any financial holding company, which conducts material financial activities in at least two of the regulated banking, securities or insurance sectors."

Bank supervisors are normally the leading supervisor of FCs. Therefore, FSAP teams also pay attention to the assessment of the *Basel Core Principles for Effective Banking Supervision*,[4] and in particular Core Principle 12, on consolidated supervision, to discuss conglomerate risks and supervisory means to mitigate them.

Effective consolidated supervision is needed to ensure that authorities have answers to relevant questions in the monitoring of risks that emanate from relationships among the members of the wider group, such as:

- The structure of financial and economic groups, including ultimate beneficial owners
- Intra-sectoral holdings and related party lending within the broader economic group
- Implications of major non-regulated subsidiaries
- Ring-fencing of major non-financial entities
- Conflicts of interest within the conglomerate
- Concentration risks at the group level
- Regulatory arbitrage
- Channels of contagion risk.

Nevertheless, in practice consolidated supervision, whether conducted by a single authority or several dedicated sectoral authorities, find the problem of a strong structural separate sectors. For example, the supervision of governance and risk management are normally siloed. Sectoral supervisors often face difficulties to coordinate well due to the different nature of businesses and risks. It is not easy to supervise and understand different financial

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[3] Joint Forum: *Principles for the Supervision of Financial Conglomerates*, Basel September 2012, https://www.bis.org/publ/joint29.htm

[4] Basel Committee: *Core Principles for Effective Banking Supervision*, Basel, September 2012, https://www.bis.org/publ/bcbs230.pdf

sectors at the same time. It would be hard to conclude that there is a robust worldwide practice of conglomerate supervision yet.

In addition, FSAP supervisory approach refers exclusively to the effectiveness of supervisors to conduct consolidated supervision, and to monitor and correct conglomerate risks that may jeopardize financial stability. This is important; however, the supervisory approach do not get into the details and analysis of the FC themselves, and their implications for financial stability. FSAP teams, therefore, develop analytical tools on the FC as well.

IMF'S ANALYTICAL APPROACH

FSAP teams dealing with challenges posed by FCs also develop analytical tools that look at the FC themselves. These take the form of macroprudential stress testing, coordinating the work on the different sectors, particularly banking and insurance. However, even if sectoral stress testing is well advanced, and the Annex to this background note provides an account of this, conglomerates stress testing, by integrating banking, insurance, mutual funds, pension funds etc. into one complex framework (highest level of consolidation) is still in its infancy.

In addition to stress tests, FSAP teams conduct interconnectedness analysis based on cross-balance sheet exposures among individual entities operating in different sectors (banking, insurance, asset management). In addition, FSAP teams conduct systemic risk analysis based on market based data (no specific IMF Guidance note but widely treated in academic circles). The IMF's Monetary and Capital Markets Department plans to introduce adjustments to its analytical toolkit to account for specific analytical issues and challenges that arise when conglomerates are present in a financial system.

QUESTIONS WAITING ANSWERS

The following questions are intended to elicit discussion:

- Is a commonly agreed taxonomy for financial conglomerates possible, desirable?
- Is there a way to systematize analytical work and conglomerate risk assessments?
- Is it possible to design a database on FC that allows for risk assessments?
- What are the most salient gaps in conglomerate supervision?

ANNEX – STRESS TESTING AT THE IMF[5]

Stress tests are an integral part of stability assessments under the FSAP and a key method in financial surveillance. Stress tests are used to measure the resilience of financial entities and assess the stability of financial systems under sever macro-financial conditions. Thereby, stress tests help identifying capital and liquidity shortfalls. Stress tests can also increase transparency and reduce uncertainty about financial sector vulnerabilities as shown in the US and Europe wide stress test exercise in the wake of the Global Financial Crisis.

The IMF is constantly improving its stress testing methods, to ensure that all sources of risk are considered. The Fund is also working on more candid and comparable FSAP assessments across countries. Basic methods and latest developments in the area of stress testing are mentioned below.

Key Aspects of Stress Testing

- Macrofinancial Stress Testing - Principles and Practices (August 2012) and Background Material
- A Guide to IMF Stress Testing: Methods and Models (December 2014) and Ancillary Material
- Presentation on "Stress Testing of Banks" (May 2014)

MCM Workbox: Guidance Notes on Stress Testing and Templates. The following Guidance Notes on Stress Testing disseminate current practices in stress testing followed by MCM. They intend to help Fund staff to implement their own stress tests and guide the implementation of bottom up (BU) stress tests of banks and insurance companies. They focus on the regulatory approach to stress testing and are supplemented by a set of methods that can be downloaded from the "Quantitative Methods" website. The Notes intend to be a forum of discussion of best practices and are live documents that will be updated and extended as necessary.

- Stress Testing Banks and Insurance Companies Overview: This note covers basic concepts and methodologies for stress testing banks and insurance companies. It also provides a road map to other guidance notes as well as to tools available in MCM's website to facilitate the implementation of stress tests.
- Scenario Design for Solvency Stress Tests: This note aims at providing guidance on scenario calibration in FSAP stress tests. It focuses on the appropriate benchmarks for gauging the severity of shocks used in stress tests. In essence, the quantitative metrics

[5] The materials referred in this Annex are available resources for IMF staff and participants in this seminar upon request to the author.

proposed in this note intends to provide some standardization or benchmarks for the magnitude of the shocks used across FSAPs.

- Treatment of Credit Risk in Stress Tests: Scenario-based solvency stress tests of credit risk require mapping the impact of macroeconomic variables on banks' loan loss provisions as well as estimating the higher capital requirements due to the higher credit risk of bank assets under the adverse scenario. Satellite models are used to estimate parameters for both. They represent one of the most challenging calibrations that the stress tester confronts. Challenges arise because of the inherent complexity of mapping macroeconomic scenarios on the creditworthiness of bank clients as well as from data limitations that will inevitably arise in most countries (even developed ones). This guidance note focuses on provisions under stress and should be read in conjunction with Guidance Note on capital requirements under stress. We start with an overall introduction to the credit risk parameters and then address issues related to their estimation under stress.
- Treatment of Sovereign Risks in Stress Tests: This note provides guidance on how to treat potential sovereign default or deterioration of sovereign credit quality in stress tests. FSAP stress tests aim at assessing true economic risks to the extent possible, while following regulatory rules. The conflict between economic and regulatory assessments emerges most acutely in sovereign risk stress test. The treatment proposed here is based on the accounting and regulatory approaches to sovereign debt but departs in some ways in order to better account for banks' economic capital under stress and deal with methodological problems.
- Treatment of Funding Costs in Stress Tests—A Fundamentals-Based Approach: The note provides guidance on how to model and calibrate the relation between bank specific fundamentals, including solvency, and funding cost. The note relies on accompanying quantitative work that was conducted to establish this relationship empirically. The interaction of different types of risk is an important factor in stress testing. In particular, solvency, liquidity and funding risks might impact each other, and lead to self-reinforcing instability spirals. For instance, low solvency translates into higher funding cost, which in turn is likely to affect solvency through reduced profits. In the extreme case, banks with weak solvency might not be able to fund themselves in financial markets. This is acute when banks rely on funding sources that are not covered by deposit insurance or other guarantees. The importance of this relation was also discussed in the board paper "Macrofinancial Stress Testing—Principles and Practices."
- Funding Costs in Stress Tests: This note describes various approaches for calculating bank funding costs and how to measure them for stress testing purposes. It describes how bank performance indicators can be related to bank ratings and funding costs. This is followed by the application of contingent claims analysis (CCA) to estimate bank funding cost and how this can be used in stress testing. The impact of

government support to too-important-to-fail banks on funding is also discussed, as well as instances where high levels of sovereign risk adversely affect bank funding cost.

- Treatment of Cross-Border Risks in Stress Testing: This note discusses how to incorporate cross border risks in bank balance-sheet stress tests as well as tools available for this analysis. The assessment of cross border financial linkages is a complex task which is often hindered by data limitation. Within these constraints, cross border financial linkages in FSAPs are analyzed in two ways: a) As part of a solvency and/or liquidity stress test for a domestic bank with international operations (using individual bank balance sheet data); and b) As a separate stand-alone exercise that maps linkages and assesses vulnerabilities stemming from these linkages across banking systems (as opposed to individual institutions) or across individual institutions (using market-based indicators, instead of balance sheet information). The conclusions are then subject to interpretation and integration with the results of the regular balance-sheet stress tests. Each approach also uses different tools.
- The Role of Risk-Weighted Assets in Stress Tests: This note discusses the role of risk-weighted assets (RWAs) in stress tests. The key consideration is whether RWAs (and consequently capital requirements) should be adjusted under stress. If the answer is yes, both actual capital and required capital will change in the stress scenario, the first one due to (expected) losses and the latter due to higher tail or unexpected risk. If the answer is no, the stress scenario will affect capital ratios mainly through the evolution of actual capital under stress. The note shows that although banks become riskier under stress scenarios (and consequently risk-weighted assets and capital requirements should increase), the actual treatment of RWAs in stress tests will depend on the regulatory regime under which banks operate. The note discusses these regulatory differences, banks' potential behavioral reactions to higher risk, and behavioral rules typically used in FSAPs.
- Stress Testing Systemically Important Foreign Branches: This note discusses the treatment of foreign branches in stress tests. Foreign branches may deserve attention if they are systemically important for the FSAP country Questions that necessarily arise are: what specific risks branches pose, when branches should be included in stress tests and if so, what the appropriate hurdle rates and metrics are.
- Design and Quality Assessment of Bottom Up (BU) Stress Tests: This note provides guidance for the design and assessment of BU stress tests conducted by the banks in the context of FSAPs. Banks undertake BU stress tests using their own models and portfolio information, but under a common framework. Together with top-down (TD) stress tests prepared by the FSAP mission, they provide information on bank resilience and potential threats to financial stability. Therefore, it is important to lay out a common framework for their design, as well as some basic rules to help assess their reliability and robustness.

- Treatment of Liquidity Risks in Stress Tests: This note discusses general principles and fundamental issues that arise in the design and implementation of cash-flow based liquidity stress tests that take into account different maturities of assets and funding sources. The issues discussed are relevant for the design of supervisory and IMF stress tests, which could be implemented through BU approaches or in a top-down fashion with detailed data inputs provided by banks. The note also introduces user-friendly excel-based tools for practical implementation of both liquidity stress tests and the Basel III liquidity coverage and net stable funding ratios.
- Practical Issues in Insurance Stress Testing - Sample Selection, Scenario Generation, Mitigating Effects, and Hurdle Rates: Stress testing insurance companies involves a thorough preparation, as the methodological framework is generally less advanced than in the banking sector and the exercise needs to be tailored to the specific valuation framework and regulatory regime in each jurisdiction. The purpose is to help Fund staff assess insurance risk, guide the preparation of Bottom Up (BU) stress tests of insurance companies, and in time, design their own Top Down (TD) tests. In addition to general guidelines, this document will elaborate on the terminology applied in the forthcoming Solvency II regulation, which should form the basis for future insurance stress testing in European Union (EU) countries.

MCM Workbox: Stress Testing Templates

- User Guide for the Solvency Stress Testing Framework and Templates for stress testing (Excel 2007 and 2013) under the Regulatory Approach. This document is meant to guide the stress tester on the use of the regulatory approach implemented using the template mentioned above.
- Template developed by MCM to estimate Liquidity Covered Ratios (LCR).
- Template developed by MCM to estimate the Net Stable Funding Ratio (NSFR).
- Template developed by MCM to estimate cash-flows mismatches under stressful liquidity scenarios.