



**Bank of France - ACPR Academic Conference**

*Monitoring Large and Complex Banks*

**Paris, December 11, 2017**

**Banque de France,**

**Conference Center, Auditorium  
31 rue Croix des Petits Champs, 75001 PARIS**

The Banque de France and the Autorité de Contrôle Prudentiel et de Résolution are very pleased to host the international conference entitled "Monitoring Large and Complex Institution".

Organizers:

Régis Breton, Laurent Clerc, Olivier de Bandt, Henri Fraise (Banque de France et Autorité de Contrôle Prudentiel et de Résolution)

## Program

8:30 - 9:00 Registration & Coffee

9:00 - 9:15 Welcome address: **François Villeroy de Galhau, Governor of Banque de France**

### 9:15 - 11:15 Session A - Complexity, Size and Business Models

*Chairman: **Henri Fraise (Autorité de Contrôle Prudentiel et de Résolution)***

1. "Organizational Complexity and Balance Sheet Management in Global Banks"

Nicola Cetorelli, **Linda S. Goldberg (New York Fed)**

Discussant: **Fabrizio Spargoli (RSM)**

2. "Business Complexity and Risk Management: Evidence from Operational Risk Events in U.S. Bank Holding Companies"

Anna Chernobai (Syracuse University), **Ali Ozdagli (Boston Fed)**, Jianlin Wang (Boston Fed)

Discussant: **Guillaume Vuillemeys (HEC)**

3. "Foreign Investment, Regulatory Arbitrage and the Risk of U.S. Financial Institutions"

**Scott Frame (Atlanta Fed)**, Atanas Mihov (Richmond Fed), Leandro Sanz (Richmond Fed)

Discussant: **Laurent Weill (Univ. Strasbourg)**

11:15 - 11:30 Coffee & Pastries

### 11:30 - 12:50 Session B - Dealing with Global Systemic Banks: Have We Done Enough?

*Chairman: **Laurent Clerc (Banque de France)***

1. "Global Banking: Risk Taking and Competition"

**Ester Faia (Goethe University Frankfurt)**, Gianmarco Ottaviano (LSE)

Discussant: **J-E. Colliard (HEC)**

2. "Why are Big Banks Getting Bigger?"

Ricardo T. Fehnholz (Claremont McKenna College), **Christoffer Koch (Dallas Fed)**

Discussant: **Glenn Schepens (ECB)**

12:50 - 14:00

Lunch Buffet : Espace Restauration of the Conference Center

14:00 - 16:00

## Session C - Supervision and Complexity

Chairman: **Olivier de Bandt (Autorité de Contrôle Prudentiel et de Résolution)**

### 1. "Multinational Bank and Supranational Supervision"

Giacomo Calzolari (University of Bologna), Jean-Edouard Colliard (HEC), **Gyongyi Loranth (CEPR)**

Discussant: **Alexander Guembel (TSE)**

### 2. "Nonconsolidated Affiliates, Bank Capitalization, and Risk Taking"

Di Gong (UIBE), Harry Huizinga (Tilburg University, CEPR) and **Luc A. Laeven (ECB)**

Discussant: **Enrico Sette (Bank of Italy)**

### 3. "Regulatory Capture by Sophistication"

**Hendrik Hakenes (CEPR)**, Isabel Schnabel (University of Bonn)

Discussant: **Jean-Charles Rochet (TSE)**

**Time allocation: Presentation: 20 minutes - Discussion: 10 minutes - Open discussion: 10 minutes**

## Abstracts

### 1- "Organizational Complexity and Balance Sheet Management in Global Banks"

Nicola Cetorelli, Linda S. Goldberg (New York Fed)

#### *Abstract*

Banks have progressively evolved from being standalone institutions to being subsidiaries of increasingly complex financial conglomerates. We conjecture and provide evidence that the organizational complexity of the family of a bank is a fundamental driver of the business model of the bank itself, as reflected in the management of the bank's own balance sheet. Using micro-data on global banks with branch operations in the United States, we show that branches of conglomerates in more complex families have a markedly lower lending sensitivity to funding shocks. The balance sheet management strategies of banks are very much determined by the structure of the organizations the banks belong to. The complexity of the conglomerate can change the scale of the lending channel for a large global bank by more than 30 percent.

### 2- "Business Complexity and Risk Management: Evidence from Operational Risk Events in U.S. Bank Holding Companies"

Anna Chernobai (Syracuse University), Ali Ozdagli (Boston Fed), Jianlin Wang (Boston Fed)

#### *Abstract*

How does business complexity affect risk management in financial institutions? The commonly used risk measures rely on either balance-sheet or market-based information, both of which may suffer from identification problems when it comes to answering this question. Balance-sheet measures, such as return on assets, capture the risk when it is realized, while empirical identification requires knowledge of the risk when it is actually taken. Market-

based measures, such as bond yields, not only ignore the problem that investors are not fully aware of all the risks taken by management due to asymmetric information, but are also contaminated by other confounding factors such as implicit government guarantees associated with the systemic importance of complex financial institutions. To circumvent these problems, we use operational risk events as a risk management measure because (i) the timing of the origin of each event is well identified, and (ii) the risk events can serve as a direct measure of materialized failures in risk management without being influenced by the confounding factors that drive asset prices. Using the gradual deregulation of banks' nonbank activities during 1996-1999 as a natural experiment, we show that the frequency and magnitude of operational risk events in U. S. bank holding companies have increased significantly with their business complexity. This trend is particularly strong for banks that were bound by regulations beforehand, especially for those with an existing Section 20 subsidiary, and weaker for other banks that were not bound and for nonbank financial institutions that were not subject to the same regulations to begin with. These results reveal the darker side of post-deregulation diversification, which in earlier studies has been shown to lead to improved stock and earnings performance. Our findings have important implications for the regulation of financial institutions deemed systemically important, a designation tied closely to their complexity by the Bank for International Settlements and the Federal Reserve.

### 3- "Foreign Investment, Regulatory Arbitrage and the Risk of U.S. Financial Institutions"

Scott Frame (Atlanta Fed), Atanas Mihov (Richmond Fed), Leandro Sanz (Richmond Fed)

#### *Abstract*

This study investigates the extent to which cross-country differences in banking regulation and supervision are relevant for the international subsidiary locations of U.S. bank holding companies (BHCs). We find that U.S. BHCs are more likely to operate subsidiaries in countries with weak regulation and supervision. Further, financial institutions' decisions to operate in locations with lax environments, while positively related to profitability, are associated with an increase in BHC risk and BHCs' contribution to systemic risk. The quality of internal controls and risk management practices of financial institutions play an important role in such location choices and risk outcomes. Overall, our study suggests that financial institutions engage in regulatory arbitrage with potentially dangerous consequences.

#### **4- "Global Banking: Risk Taking and Competition"**

Ester Faia (Goethe University Frankfurt), Gianmarco Ottaviano (LSE)

##### *Abstract*

Direct involvement of global banks in local retail activities can reduce risk-taking by promoting local competition. We develop this argument through a model in which multinational banks operate simultaneously in different countries with direct involvement in imperfectly competitive local deposit and loan markets. The model generates predictions that are consistent with the foregoing argument as long as the expansionary impact of competition on multinational banks aggregate profits through larger scale is strong enough to offset its parallel contractionary impact through lower loan-deposit return margin (a result valid with both perfectly and imperfectly correlated loans risk). When this is the case, banking globalization also moderates the credit crunch following a deterioration in the investment climate. Compared with multinational banking, the beneficial effect of cross-border lending on risk-taking is weaker.

#### **5- "Why are Big Banks Getting Bigger?"**

Ricardo T. Fernald (Claremont McKenna College), Christoffer Koch (Dallas Fed)

##### *Abstract*

The U.S. banking sector has become substantially more concentrated since the 1990s, raising questions about both the causes and implications of this consolidation. We address these questions using nonparametric empirical methods that characterize dynamic power law distributions in terms of two shaping factors — the reversion rates (a measure of cross-sectional mean reversion) and idiosyncratic volatilities of assets for different size-ranked banks. Using quarterly data for subsidiary commercial banks and thrifts and their parent bank-holding companies, we show that the greater concentration of U.S. bank-holding company assets is a result of lower mean reversion, a result consistent with policy changes such as interstate branching deregulation and the repeal of Glass-Steagall. In contrast, the greater concentration of both U.S. commercial bank and thrift assets is a result of higher idiosyncratic volatility, yet, idiosyncratic volatility of parent bank-holding company assets fell. This contrast suggests that diversification through non-banking activities has reduced the idiosyncratic asset volatilities of the largest bank-holding companies and affected systemic risk.

#### **6- " Multinational Bank and Supranational Supervision "**

Giacomo Calzolari (University of Bologna), Jean-Edouard Colliard (HEC), Gyongyi Loranth (CEPR)

##### *Abstract*

We study the supervision of multinational banks (MNBs), allowing for either national or supranational supervision. National supervision leads to insufficient monitoring of MNBs due to a coordination problem between supervisors. Supranational supervision may solve this problem and generate more monitoring. However, this increased monitoring can have unintended consequences, as it also affects the choice of foreign representation. Indeed, supranational supervision encourages MNBs to expand abroad using branches rather than subsidiaries. In some cases, it discourages foreign expansion altogether, so that financial integration paradoxically decreases. More importantly, these changes completely neutralize the more intense

monitoring that would otherwise occur with supranational supervision. Our paper provides insight into how the national boundaries of bank supervision interact with multinational banks.

#### **7- "Nonconsolidated Affiliates, Bank Capitalization, and Risk Taking"**

Di Gong (UIBE), Harry Huizinga (Tilburg University, CEPR) and Luc A. Laeven (ECB)

##### *Abstract*

This paper is the first to show that financial institutions may be effectively undercapitalized as a result of incomplete consolidation of minority ownership. Using two approaches – consolidating the minority-owned affiliates with the parent or deducting equity investments in minority ownership from the parent's capital – we find that the effective capitalization ratios of small US bank holding companies (BHCs) are substantially lower than the reported ratios. Empirical evidence suggests that the effectively lower capitalization ratios are associated with higher riskiness at the BHC level. Capital adjustments following pro forma consolidation better capture the additional risks than capital adjustments in the form of equity deductions for investments in minority-owned affiliates. These findings have important implications for the regulation of bank capital.

#### **8- "Regulatory Capture by Sophistication"**

Hendrik Hakenes (CEPR), Isabel Schnabel (University of Bonn)

##### *Abstract*

One explanation for the poor performance of regulation in the recent financial crisis is that regulators had been captured by the financial sector. We present a micro-founded model with rational agents in which banks capture regulators by their sophistication. Banks can search for arguments of differing complexity against tighter regulation. Finding such arguments is more difficult for weaker banks, which the regulator wants to regulate more strictly. However, the more sophisticated a bank is, the more easily it can produce arguments that a regulator does not understand. Reputational concerns prevent regulators from admitting this; hence they rubber-stamp weak banks, which leads to inefficiently low levels of regulation. Bank sophistication and reputational concerns of regulators lead to capture, and thus to worse regulatory decisions.