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## Editors' Note

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# Editors' Note. Risks, Deviations from Efficiency, and Financial Regulation: A Foreword



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The increasing role taken by risk management in the financial literature, and at the same time, in banking management literature, cannot be only explained by the impact that the financial crisis has had on the imbalances of financial intermediaries. The crisis has certainly led to an acceleration and intensification of a process which began some time ago, and that could indeed be inherent in the nature of credit and financial companies.

The development of the theories of financial intermediation, since the seminal contribution by Pyle (1971) supporting the uncertainty assumption that contracts are «intrinsicly» and «specifically» risky, and that agents are adverse to risks, has introduced the main intuition that the existence of banks may be explained by the deviation from efficient market hypothesis.

More specifically, one of these deviations is the demonstration of the invalidity of the assumption that there are no externalities in the market. While the discussion of the role of externalities has a long thread throughout the literature on economic theory, and includes many important contributions by the major theoreticians of the 20<sup>th</sup> century, the focus has always been on the production of commodities and to a lesser extent services. There has been little use of this notion in the analysis of financial markets, with some notable exceptions. One is the research, by Stiglitz (2002), of how asymmetric information results in market inefficiency or market failure, especially of the type known as incompleteness, of financial and insurance institutions.

Particularly, the asymmetric information theory provides many clues not only for explaining the existence and the crucial role of banks in financial markets and in the economy as a whole, but also for explaining financial fluctuations and their recurring degeneration into serious, sometimes devastating, financial crises. The causal mechanisms, triggered by an increase in the interest rate producing a positive feedback with asymmetric information, are liable to trigger cumulative processes bringing about recurring fluctuations, and under particular circumstances, financial collapse.

Again, an important violation of the efficient market theory is the presence of external diseconomies from the activity of risk taking. It is an inherent characteristic of risk taking in financial markets that it can have a material and adverse impact on

those beyond the risk taking firm and even the immediate counterparties of the risk-taking firm. It becomes an externality when it affects firms and individuals who are neither counterparties to the transaction nor the firm, and who might not even be participating in the same market. It is inherent in that it is an unavoidable consequence of risk taking.

In other terms, we could say that the core business of financial institutions is trading (and hedging) risk. Consequently, their portfolios are full of risks that are expected to be measured, monitored, and managed. Thus, we arrive at this point: risk management is not only an organisational office to oversee the accuracy of exposures and their coherence with policy, limits and financial regulation. It is the discipline that is able to find out how the «core commodity» of financial and credit firms arises. It is one of the key rationales (if not the main rationale) of financial regulation. It should form a major part of the training background of financial institution managers and directors who assess and design the strategy based on risk appetite and the connected expected returns.

That is why a conference devoted to risk management, like the International Risk Management Conference (IRMC) – which in 2017 reached its 10<sup>th</sup> edition – has hosted not only papers and speeches that focus on traditional risk management topics, but also on Asset Pricing, Banking, Financial Econometrics, Capital Markets, Corporate Finance, Financial Crises, Corporate Governance, Market Microstructure, Financial Regulation, Corporate Investment Decision, Global Risk Markets, Macro-financial Linkages, Financial Policy, Securitization, and Behavioural Finance.

This issue collects some of the most relevant papers in terms of research questions, methodologies and policy implications.

The paper written by Andrea Pagano addresses the question «Does CRDIV provide an efficient way to deal with banks' simultaneous defaults?». The Author focuses on issues relating to the Capital Requirement Directive IV detailed rules on the new global regulatory standards for bank capital adequacy, and runs a quantitative assessment where banks are part of a common economic environment. Through a micro simulation portfolio model, the paper estimates the aggregate distribution of bank losses assuming banks are interconnected via a correlation structure, and possibly, a contagion network. The main results are that systemic loss in the presence of a correlation across banks is 5% higher than what the system may experience without any correlation. Another key finding is that the regulatory rule of requiring extra capital as soon as the common equity falls below 5.125% of risk weighted assets is more efficient than asking GSIBs or all banks to increase their Common Equity Tier 1.

Oana Toader and Sebastian Schich face one of the main issues about the significance of being a global systemically important bank. Elements of recent bank regulatory reform plainly focus on ending the «too-big-to-fail» phenomenon. As part of these efforts, some banks have been designated as «globally systemically important banks» (henceforth G-SIBs) and a tighter regulatory, supervisory, and failure resolution regime has been imposed on them. The article asks what the effect of this special treatment on the value of implicit bank debt guarantees of these banks has been, as measured by credit rating uplifts. Based on a sample of 27 G-SIBs and a control group of 177 other large banks from 23 countries for the period from 2007 to 2015, the article finds that the treatment

has not significantly altered the value of implicit bank debt guarantees for G-SIBs, as of yet. G-SIBs continue to benefit from a significantly higher value of implicit guarantee than other banks. The article also finds that tightened resolution practices, at the national level, have significantly reduced the value of implicit guarantees for other banks, but not for G-SIB banks. The results in the paper are nonetheless consistent with the view that the broader package of regulatory reform, and in particular changes to resolution regimes, have had the desired effects, which is to limit the notion that the debt of banks benefits from implicit publicly provided guarantees. In this regard, actions seem to speak louder than words: imposing losses on debtholders as part of changed resolution practices matters more than changing resolution frameworks without applying the newly available instruments and implicating debtholders in the loss-sharing. That said, G-SIBs' debt valuations have escaped the effect of the changed resolution practices so far; in that sense, being a G-SIB does matter.

The paper «Ambiguity and Interbank Market Participation: Relationship and Transactional Banking» by Reina Renard introduces an equilibrium model where either risk adverse (RA) or ambiguity adverse (AA) banks face the choice whether or not to fully participate in the interbank market. Risk adverse banks know the probability distribution of their counterparty with regard to default, and they maximise their utilities. Ambiguity adverse banks don't have a unique prior, have a min-max preference (maximise the worst-case scenario) and behave cautiously. Interbank lending is possible by establishing stable lending relationships with other banks, or by engaging in transactional banking. Relationship lending allows lenders to reduce ambiguity but it entails costs. The assumption of the paper is that these costs are lower for larger banks. Borrowers prefer low interest rates, and the prevailing banking type in equilibrium is determined by the lowest interbank rate.

An initial interesting result of the paper is that relationship lending reduces participation for ambiguity adverse banks. Another interesting result is that participation increases non-linearly with the interbank rate, as different groups enter the *IBM*: first RA banks enter and engage in transactional banking, then AA banks enter, and whether lending is relationship or transactional, depends on the parameters of the model. The paper's outcomes could be potentially relevant for regulators and central banks – policy and regulation should react efficiently in terms of the microstructure features – but also for lending banks in the light of portfolio choice. The author in fact suggests that, besides considering the links between banks in the *IBM*, regulators should account for how preferentially connected banks are, and therefore, determine the optimal level of relationships.

The final paper presented in this special issue is «Data Mining of Contingent Convertible Bonds». Jan De Spiegeleer, Ine Marquet and Wim Schoutens develop and apply sophisticated data mining techniques to detect at an early stage the potential risks regarding the stability of institutions by using market information on their issued contingent capital instruments (CoCos). The authors suggest that the identification of outliers can interest market analysts, risk managers, regulators and traders. In order to investigate the issue, robust methodologies (Multivariate Covariance Determinants and Mahalanobis Distance to detect the outliers) are used. Outlier CoCos are detected in comparison to previous periods taking into account extreme market price movements. The paper applies

a new risk measure, called the Value-at-Risk Equivalent Volatility (VEV), introduced by the European authorities in the new PRIIPs regulation (to be implemented for all structured products by January 1<sup>st</sup> 2018). The paper is relevant for both regulators and scholars interested in financial stability and in the early warning measures obtained using CoCos information.

In summation, this special issue, in a similar fashion to the International Risk Management Conference that it materialises from, offers a wide range of topics regarding risk management for financial institutions. In all of the papers presented, theoretical implications stand beside regulatory insights, with the outcome being that readers may profit from both perspectives.

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