

# RESEARCH

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Prof. Theoharry Grammatikos, Post-Doctorate Researcher Sara Ferreira Filipe, and PhD student Magdalena Pisa will be working on an EIB-funded project for the next three years.



## LSF to receive European Investment Bank support Three-Year Grant

By Magdalena Pisa

A proposal on “Benchmarking European Small and Medium-sized Enterprise (SME) Credit Performance” by Theoharry Grammatikos, Professor of Corporate Finance, and Magdalena Pisa, PhD student in Finance, was awarded a European Investment Bank University Research Sponsorship (EIBURS) three-year grant. Sara Ferreira Filipe, post doctorate researcher in Finance, has also joined the project. EIBURS grants are awarded through a competitive process to interested University Departments in the EU, Acceding or Accession Countries to support research in fields of interest to the EIB. The grants aim at expanding the activities of the Research Centers in these fields.

## Risk measurement of loans to SMEs

The researchers will examine the risk assessment of loans granted to SMEs and its relation to SME securitized notes. The role of the mortgage loan market in the recent financial crisis has highlighted various weaknesses of the institutional, regulatory and securitization environments. Imperfections in the risk measurement tools and in the transparency of securitized notes have particularly attracted researchers' attention.

The research project seeks to address various aspects of risk measurement in the SME securitized notes in Europe. Risk measurement of SME-loan backed notes is captured in a three layered structure which gradually enriches the micro-information available at the firm-level by also including industry, macroeconomic and legal risk factors. Furthermore, contagion or the spreading of the financial distress between industries and countries is going to be exposed and incorporated into the risk measurement estimation.

Finally, the study explores the composition of a pool of SME loans which minimizes risk for the senior securitized notes. The methodology includes models of default risk prediction (a variant of the Altman ZScore), the hazard rate model and the binomial probability model. Stress testing and contagion models compose another set of methods used for the purpose of measuring risk in SME securitized notes.



**"I certainly hope that this project could be just the start of a long and fruitful relationship of the two Institutions"**

**Theoharry Grammatikos**



**"It will allow practical contributions to financial firms' risk management"**

**Sara Ferreira Filipe**



## Implications of SMEs project

The study's results should allow a practical implementation by the financial institution's units concerned with internal risk measurement and economic capital assessment.

An improvement of the related risk measurement and management systems is important in view of the size of the SME loan market and, most importantly, its potential impact on the stability of the financial system.

There are obvious similarities between mortgage backed securities and SME

securitized notes, both on the underlying mechanism and the complexity of the product.

In the aftermath of the financial crisis, it is crucial to prevent similar problems in a market as important as the SME loan market. Mitigating this risk will also depend on a greater information transparency regarding firm and industry related aspects.

Therefore the research results should lead to policy insights about a possible Loan Disclosure Initiative on SME securitized notes.

## SMEs: the *unknown* goose that lays the golden eggs

SMEs account for 40% of the internal employment in Luxembourg and contribute significantly to the country's GDP. Various initiatives undertaken by Luxinnovation, the Chambre de Commerce Luxembourg, and the Ministry of the Middle Classes, Housing and Tourism demonstrate a strong public engagement in the issues concerning SMEs. Yet this topic, and especially SME default risk measurement, has not been fully researched in the literature.

The project's objectives are to bridge this gap and to provide new insights which will be of interest to the academic world, the industry, and the policy makers.

SMEs are a very interesting and rewarding subject because it has a direct real-world connection. The outcome of this study will not remain in the abstract sphere of research but should contribute to the market practices of SME financing and thereby should make a positive contribution for all stakeholders concerned with SMEs.



**"It is a unique opportunity to analyze SME credit performance on a European scale"**

**Magdalena Pisa**