House of Finance

SAFE

Sustainable Architecture for Finance in Europe

Newsletter

Q4 2015

Imprint

Publisher:
Prof. Dr. Wolfgang König • Executive Board
Research Center SAFE
House of Finance • Goethe University
Theodor-W.-Adorno-Platz 3
60323 Frankfurt am Main • Germany

Editors:
Dr. Muriel Büsser
Ina Christ
Prof. Dr. Wolfgang König
Bettina Stark-Watzinger

Contact:
info@safe-frankfurt.de
www.safe-frankfurt.de

Design:
Novensis Communication GmbH
Bad Homburg

4th Edition

Printed in Germany

About SAFE

The Research Center SAFE – "Sustainable Architecture for Finance in Europe" – is a cooperation of the Center for Financial Studies and Goethe University Frankfurt. It is funded by the LOEWE initiative of the State of Hessen (Landes-Offensive zur Entwicklung wissenschaftlich-ökonomischer Exzellenz). SAFE brings together more than 40 professors and just as many junior researchers who are all dedicated to conducting research in support of a sustainable financial architecture. The Center has two main pillars: excellent research on all important topics related to finance; and policy advice, including the dissemination of relevant research findings to European decision makers from the realms of politics, regulation and administration.

In order to promote a fruitful exchange with interested parties from politics, academia, business and the media, SAFE issues a newsletter on a quarterly basis. This aims to provide an overview of the Center's ongoing research and policy activities. The SAFE Newsletter succeeds the House of Finance Newsletter, which was published between 2009 and 2012.

SAFE is based at Goethe University's House of Finance, however extends beyond by drawing on scholars from other parts of Goethe University as well as from fellow research institutions. The Center builds on the reputation of the House of Finance institutions, serving as an interdisciplinary think tank on the issue of finance.

Content

Editorial

Jan Pieter Krahnen
Director, SAFE

The SAFE Policy Center annually organizes a Summer Academy designed as a training seminar explicitly for European policymakers. This year's academy, on the topic "Banks and markets in Europe's financial architecture", took place on the 22nd and 23rd of September, in Brussels, at the representation of the State of Hessen. We were able to welcome more than 50 participants and speakers from sixteen European member states, representing many of the institutions involved in the legislation and implementation of financial markets regulation: the European Commission, the European Parliament, the Council of the EU, European regulatory and supervisory institutions, national ministries of finance and economics as well as the European Central Bank and national central banks.

We were thrilled to have Elke König, Chair of the Single Resolution Board (SRB), deliver the opening keynote address on the implementation status of the Single Resolution Mechanism (SRM). Representatives from the European Commission, ECB, ESMA and BIS presented views from the perspective of policy making institutions. The industry side was represented by Deutsche Bank, Natixis and Stone Milliner Asset Management. Insights from academia were brought in by a number of colleagues from Goethe University, but also from Cass Business School, Université Libre de Bruxelles and ESMT. Thomas Wieser, President of the Economic and Financial Committee of the European Union, closed the Academy with a keynote speech on "The CMU agenda: a roll-back of the banking union project?", arguing that CMU is complementary to the banking union objectives and that both will lead to a de-risking of Europe's financial system.

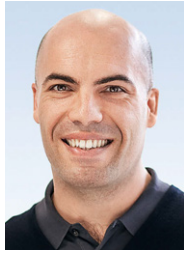
The Summer Academy is a perfect example for a format which allows SAFE to foster the dialogue between political decision-makers and academics. Participants receive a fact- and evidence-based assessment of recent regulatory changes, allowing them to appraise the need for corrections or further reforms.

The interactive format of the Summer Academy also holds valuable insights for academics: the contributions of the participants help to understand better the workings of policy institutions and the constraints policy makers need to adhere to, in their efforts to reform the financial architecture. Both sides profit from these exchanges and the new perspectives gained. In many cases, the Summer Academy leads to new connections between academia and the policy realm and we are proud that SAFE has become a facilitator for these important exchanges (see also p. 12).

Yours sincerely,
Jan Pieter Krahnen

Do the Benefits from Social Security Outweigh the Costs of Distortionary Taxation?

Daniel Harenberg
ETH Zurich



Alexander Ludwig
Goethe University & SAFE

Almost all industrialized countries have large public social security systems with sizeable pay-as-you-go components. In such systems, payments to current pensioners are financed by taxing current workers. Social security can hence improve intergenerational risk sharing by pooling the risk of aggregate productivity losses, which leads to reductions in wages and asset returns, across generations. In addition, most systems have some form of redistributional component and, hence, can also insure against idiosyncratic earnings risks (e.g. the risk of unemployment). However, these systems are financed by distortionary taxes. The question arises as to whether the benefits from insurance outweigh the costs of distortionary taxation.

To study the welfare consequences of introducing a social security system, we develop an analytically tractable overlapping generations model where households face both idiosyncratic and aggregate risks. Our analysis differs from the previous literature in that, thus far, prior studies have only considered models with one type of risk in isolation (see Krueger and Kubler, 2006, or Conesa and Krueger, 1999). We argue that simply combining the findings from this previous literature leads to potentially severe biases in the welfare assessments of social security as the benefit from this joint insurance is a convex function of total risk. Hence, the whole insurance gain is greater than the sum of the numbers reported in the previous literature. However, this statement only refers to the gains from insurance and is agnostic regarding the welfare losses of distortionary taxation. If these welfare losses also increase more than additively in both risks, then it is unclear which effect is dominant. Our objective is therefore to qualitatively characterize the net welfare effects of introducing social security in the presence of both risks.

Overlapping generations model

To this aim, we develop an overlapping generations model with incomplete markets and a social security system. For reasons of analytical tractability, we assume that a household lives for two periods, so that at each point in time, two generations are simultaneously alive. In the first period of life, households earn labor income, which is subject to an aggregate wage shock. Out of this labor income workers can consume and save. There is a single asset whose return is stochastic which represents a second aggregate risk. The second period of life consists of two sub-periods. In the first, households again earn labor income, but now receive an idiosyncratic productivity shock in addition to the aggregate wage shock. In the second sub-period, households retire and receive pension income.

We construct the model in general equilibrium by assuming a representative firm with a standard neoclassical production function. Production is subject to aggregate business cycle risk which gives rise to the aggregate fluctuations of wages and asset returns. A crucial assumption maintained throughout is that all shocks are mutually orthogonal, i.e. they are statistically independent of each other so that there is no direct interaction between the risks. Social security in our model is a pure pay-as-you-go system with defined contributions and a lump-

sum pension. With this design, the system partially insures both aggregate and idiosyncratic risks.

Positive risk interaction

Our first set of results looks at insurance provided through social security and how it is affected when two risks are present. To this end, we study a partial equilibrium version of the model and we assume that households only consume in the second period of life. As our first main finding, we establish that the joint presence of both risks increases the welfare benefits from insurance against old-age consumption risk more than additively (see panel A of Figure 1). Hence, the whole welfare benefit from insurance is greater than the sum of welfare gains from insurance against isolated risk components. We speak of this welfare difference between the whole effect and the sum of its parts as resulting from (positive) risk interactions, bearing in mind that risk interactions are indirect here in that they operate through the utility function or the social welfare function.

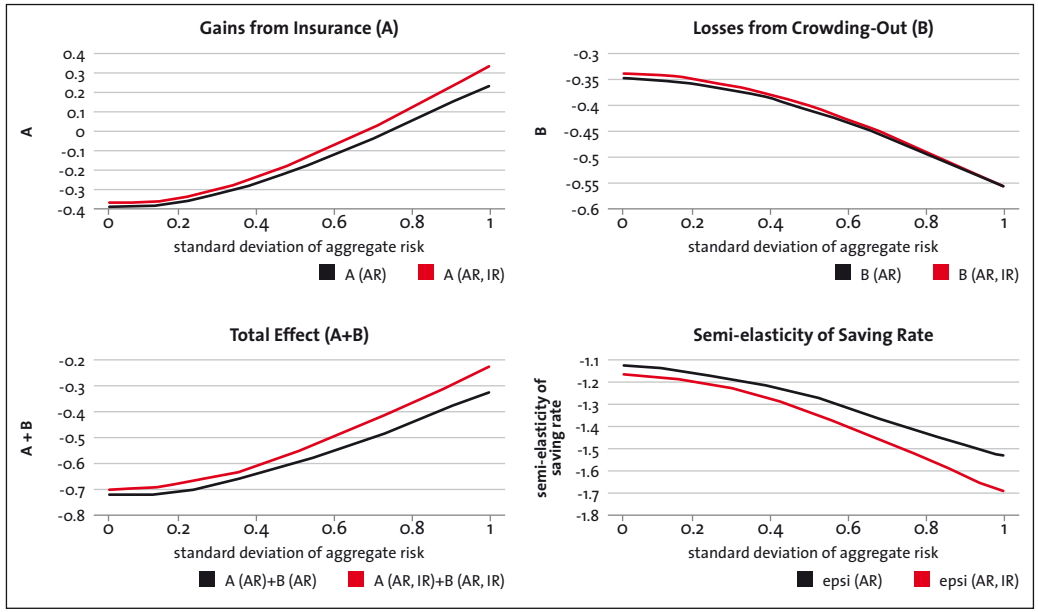


Figure 1: Welfare effects in general equilibrium with gains form insurance (A) and losses from crowding-out (B). A(AR) and B(AR) are for an economy with only aggregate risk, and A(AR, IR) and B(AR, IR) are for an economy with aggregate and idiosyncratic risks.

Our second set of results characterizes how these risk interactions affect the welfare costs of the crowding-out of capital formation. A higher contribution rate distorts the savings decision and therefore leads to a crowding-out of aggregate capital. Since we assume that the economy is dynamically efficient, the crowding-out leads to welfare losses. Our central result here is that when idiosyncratic risk is increased, the welfare losses from crowding-out are determined by two opposing forces. On the one hand, increasing idiosyncratic risk leads to larger crowding-out, because the marginal introduction of social security now (partially) insures a larger risk. This increases the welfare losses from crowding-out. On the other hand, higher idiosyncratic productivity risk increases precautionary savings so that households will profit more from the higher interest rate that results from the crowding-out of aggregate capital. The net effect depends on the relative strengths of the opposing forces.

Minimum flat pension improves welfare

As a consequence, while the insurance gains of social security are unambiguously increased through the interactions, the result for the welfare losses is ambiguous. We therefore conclude that it is a quantitative question whether social security can ultimately increase welfare in economies with both risks. While our illustrative example here shows an overall negative net effect (see Panel "Total Effect" of Figure 1), we develop in our companion paper (Harenberg and Ludwig, 2015) a realistic quantitative model which is suitably calibrated. There, we document that, indeed, the interactions of risks overturn conventional findings on the welfare effects of social security and we conclude that the introduction of a minimum flat pension is welfare improving once all household risks are appropriately taken into account.

References

Conesa, J. C., Krueger, D. (1999)
"Social security reform with heterogeneous agents",
Review of Economic Dynamics, Vol. 2, Issue 4, pp. 757-795.

Harenberg, D., Ludwig, A. (2015)
"Idiosyncratic risk, aggregate risk, and the welfare effects of social security",
SAFE Working Paper No. 59.

Krueger, D., Kubler, F. (2006)
"Pareto-improving social security reform when financial markets are incomplete!?",
American Economic Review, Vol. 96, Issue 3, pp. 737-755.

The full paper was published in International Tax and Public Finance, Vol 22, Issue 4, pp. 579-603, and is available at: http://link.springer.com/article/10.1007%2Fs10797-015-9368-x

"Nobody is Perfect": When Heterogeneous Investors Exhibit Different Kinds of Filtering Errors

Nicole Branger
University of Muenster & SAFE

Christian Schlag
Goethe University & SAFE

Lue Wu
Oliver Wyman

Some quantities on financial markets are unobservable and market participants have to estimate them based on the data they can observe. One example is the currently expected growth rate of the economy over the next period. This number is not directly observable and varies over time. However, investors can use past data and 'filter' their estimate for the growth rate, which is then the basis of economic decisions, such as consumption, saving or asset allocation. The result of this filtering process, however, depends on the initial assumptions made by the investor on the dynamics of the growth rate and its relation to observable quantities. Since the true growth rate is not observable, the investor can never be sure to actually use the 'true' model. In reality, investors will also be heterogeneous with respect to the assumptions they make, and, in general, no investor will have a model that is exactly equal to the true one. In this paper we analyze the implications of heterogeneous beliefs.

We look at two investors who both use an incorrect model for the dynamics of the expected growth rate so that 'nobody is perfect'. The errors made by the investors can be with respect to rather different characteristics of the model, so that the magnitudes of the respective errors are not easily or directly comparable.

Misspecification with respect to different parameters

The classical kind of model misspecification analyzed, e.g., in Scheinkman and Xiong (2003) and Dumas et al. (2009) is 'over-confidence' with respect to a signal that investors can observe in addition to the dividend flow. In this typical setup one investor assumes that innovations to the signal are correlated with innovations to the expected growth rate, whereas the other one correctly assumes that the two innovations are independent. It is intuitively clear that in such a setup only the rational investor will survive, while the other investor makes consumption and investment decisions which will drive him out of the economy in the long run. Yan (2008) also analyzes a model in which both investors can potentially be wrong with respect to the long-run growth rate and shows that this basically puts the investor with the larger absolute error at a disadvantage.

Given the literature on models where exactly one of the two agents is at a disadvantage concerning her filtering model or where both investors make the same kind of mistake, we ask the next natural question: What happens when both investors use a misspecified model to draw their inference about the unobservable expected dividend growth rate? For example, while one investor might be over-confident, the other one might assume an incorrect value for the volatility of the expected growth rate process. Alternatively, one investor might be a long-run optimist or pessimist, i.e. she over- or underestimates the long-run mean of the expected growth rate relative to the true model, while the other investor incorrectly assumes that the innovation in the dividend is correlated with the innovation in the expected growth rate (over-confidence).

Fatal errors and long-run survival

The concrete questions we are tackling in the paper are the following: First, is there a mistake

on the part of one investor, which is so bad that the investor will (slowly) lose her wealth, no matter what kind of error the other investor commits? Second, is there a direct link between the issue of 'long-run survival' (i.e. if an investor does or does not lose all her wealth over time) and asset pricing results in the sense of expected stock returns and volatilities?

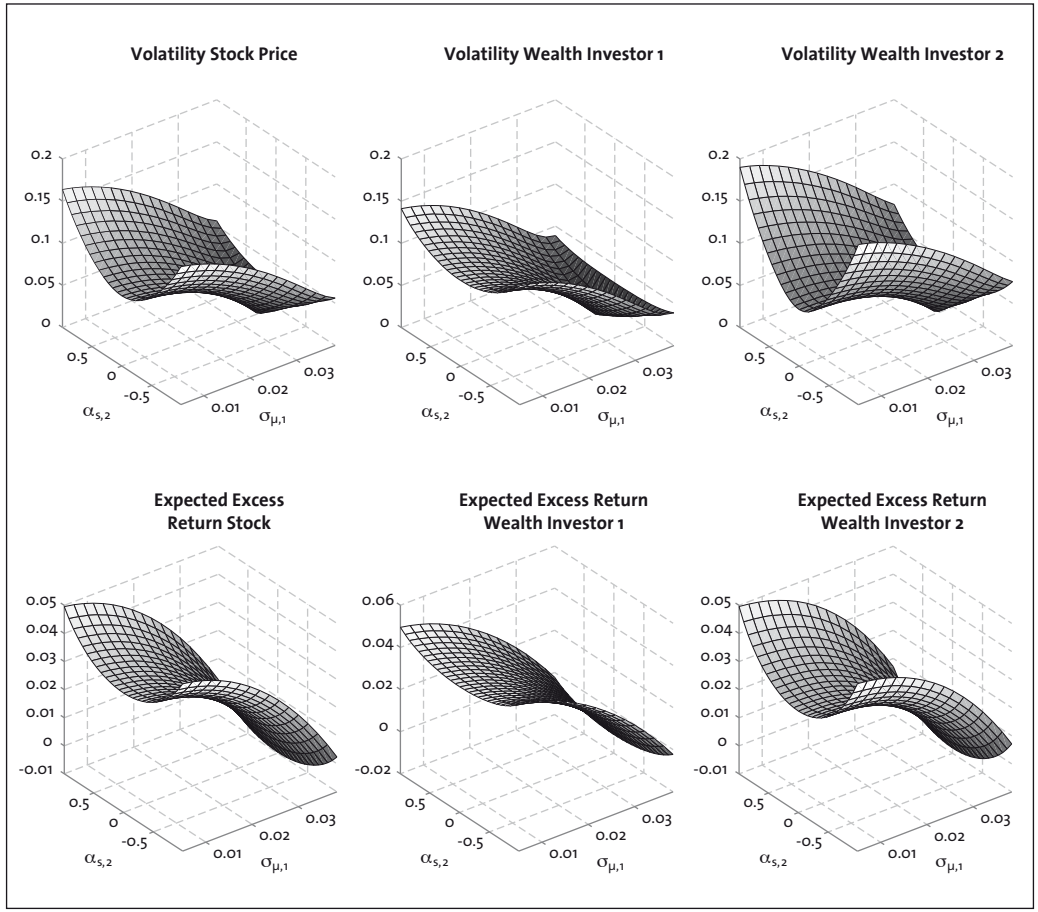


Figure 1: Expected excess return and return volatility of the stock and the two investors' respective individual wealth levels. $\sigma_{\mu,1}$ is the volatility of the process for the expected growth rate μ as assumed by investor 1. $\alpha_{s,2}$ is the correlation assumed by investor 2 between signal innovations and innovations in μ.

The answer to the first question is 'yes'. For example, when one investor assigns substantially too much informational value to a signal, which in reality just represents noise (over-confidence), she will ultimately lose all her wealth, irrespective of the degree to which the other investor assumes, e.g., an incorrect volatility or an incorrect long-run mean of the expected growth rate of the economy. So there are limits to the trade-off of different types of errors against each other.

Prices and returns ultimately in line with investor rationality

The answer to the second question is 'no' in the sense that the asset pricing results are basically independent from the outcome with respect to long-run survival. There are many cases when a reduction of one investor's disadvantage in terms of survival due to simultaneous model misspecification on the part of the other investor makes stock returns more rather than less volatile. (Figure 1 shows expected returns and volatilities for different combinations of the investors' errors about the volatility of expected growth and the impact of the signal.) Stated differently, it is the absolute value of each model misspecification which matters for asset pricing moments, not the relative size of the error as compared to the other investor. While there is, thus, a trade-off between errors when it comes to survival, the errors basically add up when it comes to asset pricing moments.

The paper provides insights into the link between (imperfect) information processing by investors and financial market outcomes. It gives an example for a situation characterized by market dynamics, which seem to exhibit features like excess volatility, but when all the elements of the economic decision problem are taken into account, prices and returns are ultimately in line with investor rationality.

References

Dumas, B., Kurshev, A., Uppal, R. (2009)
"Equilibrium portfolio strategies in the presence of sentiment risk and excess volatility",
Journal of Finance, Vol. 64, pp. 579-629.

Scheinkman, J., Xiong, W. (2003)
"Overconfidence and speculative bubbles",
Journal of Political Economy, Vol. 111,
pp. 1183-1219.

Yan, H. (2008)
"Natural selection in financial markets: Does it work?",
Management Science, Vol. 54, pp. 1935-1950.

The full paper is forthcoming in the Journal of Economic Dynamics and Control and is available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2642274

Interview:
"There Have Always Been Risk Spillovers in Europe"

Loriana Pelizzon
Goethe University & SAFE

Loriana Pelizzon is SAFE Professor of Law and Finance at Goethe University Frankfurt since October 2013. Previously, she was at the University of Venice, MIT Sloan School of Management and London Business School where she also earned her doctorate in finance in 2002. Her current research focuses mainly on issues related to the financial crisis, such as systemic risk, risk management, credit derivatives and contagion risk.

You have conducted a lot of research on contagion effects among Eurozone countries. What are your latest findings?

I have a number of recent papers on this issue, each looking at different aspects. For instance, in Caporin et al. (2015), we look at the period from 2003 to 2013 and investigate whether the shock transmission between Eurozone states changed over this period. Clearly, in a monetary union with a single market, countries are heavily interlinked. When one has an infection, this will, most probably, propagate to the rest of the system. We show that there have always been risk spillovers in Europe. Sovereign bond yields were highly interconnected before the financial crisis. Markets were not really distinguishing between German or Greek government bonds. However, we observe a structural break in 2008, which changed the way through which risk is spread. This means that serious contagion effects did not just start with crisis developments in Greece, Portugal, Spain or Italy, but already with the Lehman default in 2008.

Can you explain whether contagion is based on fundamental economic relations between countries or more due to psychological effects?

We did not find evidence for an overreaction of the market. The spillovers we observe are caused mainly by the fact that some countries became more volatile. So, the relationship between countries did not change substantially, but the amount of risk that was spread became larger, due to the larger volatility in the countries where risks originated. In fact, the economic interlinkages, for instance between Greece and Germany, have declined rather than increased since the crisis. Therefore, spillover effects were even a bit smaller than one would have expected if the system had remained the same as before the crisis. This reduction of linkages was definitely beneficial. The amount of risk generated, especially by Greece, was so large that the overall damage would have been much larger if interconnections had been at pre-crisis levels.

In a related paper (Aït-Sahalia et al., 2014) you looked more into the details of how risk spreads among countries.

In this paper we analyze how much of a risk jump in a certain country will be propagated to other countries. We designed a model to capture the dependencies between countries and then studied whether contracts for credit default swaps (CDS) were priced consistently with the predictions of the model. As CDSs provide insurance against the risk of default of the debt issuer, their spreads provide key information about the market's view on the arrival rate of default events and, as such, about default probability itself and cross-excitation. The broad empirical implications of the model are reassuring due to their plausibility and realism: Ireland, Portugal, Spain and Italy are the main countries affected by events in Greece, with results varying in strength across the countries, France and Germany are affected to a lesser extent (see Figure 1).

In your paper, you suggest to use the knowledge about the different strengths of contagion effects to make policy interventions more effective.

From an economic point of view, policy makers should intervene in those parts of the system that send out the largest shock waves. Our model provides policy makers with the information they need to design effective stabilization policies. It offers information on the extent to which

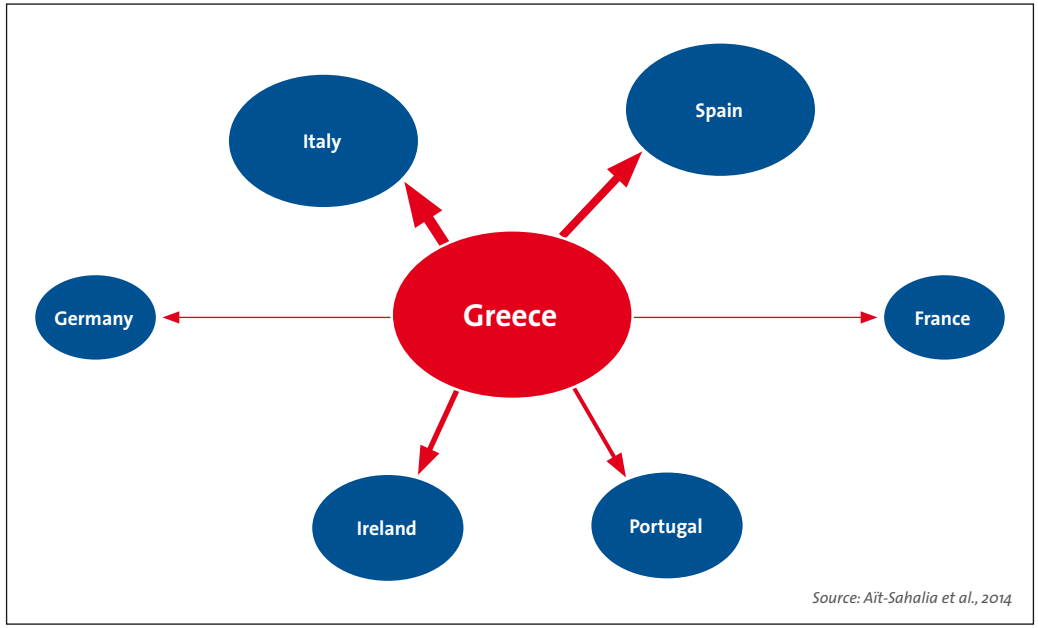


Figure 1: Impulse-response analysis: estimated increase in the annualized probability of default in several countries due to an initial exogenous shock in Greece. The shorter and thicker the arrows, the more exposed is a country to excitation by Greece.

the probability of bond defaults is reduced by preventing a risk jump in a certain country. Conversely, it also tells you how much risk you are taking on when you do not intervene. Thus, it can help to decide how to allocate limited resources for policy measures. With respect to the recent crisis, we can say that the funds for Greece were definitely well placed because the majority of risk jumps came from there. In comparison, the jumps in Italy or Spain were quite small. So, costs would have certainly been higher, if the money had not have been used for Greece. If anything, the measures taken may not have been sufficient.

In a third paper (Pelizzon et al., 2015), you look at the impact of several interventions by the European Central Bank (ECB). Which was the most effective?

In the period from 2010 to 2012, the ECB intervened in several different ways to stabilize markets and provide liquidity to the system: they bought government and corporate bonds (SMP), they gave money directly to banks (LTRO), they even tried to persuade clearing houses to reduce their margins. In fact, this was a huge problem. On top of overall rising default risks, clearing houses all around Europe increased their margins three- to fourfold during this time. Clearly, they wanted to be safe but, by doing so, they dried out market liquidity.

We analyzed which of these interventions was the most effective in terms of stabilizing market liquidity and reducing the connection between default risk and liquidity. We found that there was a structural break in 2012 when belief in the market came back. In our view, this was due to LTRO, which not only provided banks with liquidity but also affected demand and supply on repo markets. Banks no longer needed to go to the repo markets to get funds, they could directly go to the ECB. Thus, clearing houses had to take fewer risks and could lower their margins.

What can you say on the state of markets today?

Government bond markets have restarted and are doing well. However, we have a new phenomenon today with quantitative easing (QE). The ECB is buying bonds for 60 billion euros every month, the majority of which are sovereign bonds. This time, the objective is to restart the economy. But, of course, there are secondary effects. QE may create problems by reducing supply in the sovereign bond market and by providing too much liquidity to the equity market. If market participants turn to more risky assets than bonds, this could create a serious bubble. So, my current work is to include QE in these types of models, in order to see how this is affecting market liquidity and equity prices.

References

Aït-Sahalia, Y., Laeven, R., Pelizzon, L. (2014) "Mutual Excitation in Eurozone Sovereign CDS", Journal of Econometrics, Vol. 183, Issue 2, pp. 151-167 (SAFE Working Paper No. 51).

Caporin, M., Pelizzon, L., Ravazzolo, F., Rigobon, R. (2015) "Measuring Sovereign Contagion in Europe", SAFE Working Paper No. 103.

Pelizzon, L., Subrahmanyam, M. G., Tomio, D., Uno, J. (2015) "Sovereign Credit Risk, Liquidity, and ECB Intervention: Deus Ex Machina?", SAFE Working Paper No. 95.

Euro Area Macro-Financial Stability: A Flow-of-Funds Perspective

Günter W. Beck
University of Siegen & SAFE

Hans-Helmut Kotz
Harvard University & SAFE

Natalia Zabelina
Research Center SAFE

The global financial crisis (as well as the European sovereign debt crisis) has led to a substantial redesign of rules and institutions – aiming in particular at underwriting financial stability. At the same time, the crisis generated a renewed interest in properly appraising systemic financial vulnerabilities. Employing most recent data, taking a "functional approach" to finance and applying a variety of largely only recently developed methods, we provide an assessment of indicators of financial stability within the euro area. Our results reveal a declining role of banks (and a commensurate increase in non-bank banking). These structural shifts (between institutions) are coincident with regulatory and supervisory reforms (implemented or firmly anticipated) as well as a non-standard monetary policy environment. They might, unintendedly, actually imply a rise in systemic risk. Overall, however, our analyses suggest a financial intermediation sector which has become more resilient. Nonetheless, existing (equity) buffers would most probably not suffice to face very severe, but not unprecedented, shocks.

The Great Financial Crisis (GFC) and its subsequent iteration, namely sovereign debt instability in the euro area's periphery, has forced European policymakers to embark on institutional innovations in financial market supervision which seemed much too ambitious to ponder still in 2009. In addition, the regulatory software has been comprehensively re-configured and updated. These encompassing amendments in the regulatory landscape will significantly and differentially impact activities within the financial-intermediation sector. This includes side effects, possibly unintended and potentially unwarranted, such as a substitution away from more heavily (banks) towards less or differently regulated entities (non-bank banks).

Functional finance perspective

To analyze and assess potential consequences of these developments, we take a "functional finance" perspective, as developed by Robert C. Merton (e.g. Merton, 1995). This line of reasoning starts from functions (i.e. services offered) and takes them as a given. From this angle we try to appraise institutional evolutions – hence, it is institutions that change. "Financial innovation [...] sometimes appears to threaten the stability of the system, by providing the means to circumvent institutionally based regulation at low cost" (Merton, 1995, p. 10). And, quite obviously, a large part of what has been going on in non-bank banking amounted precisely to such circumvention activity. Thus, we zero in on potential risks as well as systemic externalities associated with how different institutions discharge those identical functions.

In conducting our study we employ up-to-date financial accounts, traditionally referred to as flow-of-funds data, covering the pre-crisis, the crisis and after-crisis period. These data capture income and spending flows and their logical corollary, namely financial flows as well as the resulting changes in stocks of financial assets and liabilities, all in nominal terms. And, by brute force of accounting principles, a consistent and closed system of flows between sectors and their respective balance sheets (stocks) arises. As de Rougemont and Winkler (2014) emphasize, the flow-of-funds approach enforces consisten-

cy in three dimensions: uses and sources have to match, between-sector flows balance and flows result in (precisely) equivalent changes in stocks. While this might appear obvious, honoring these constraints is not a stronghold of conventional models. In line with the functional approach taken, we include data on both bank (monetary financial institutions [MFI]) and nonbank (insurance corporations and pensions funds [ICPF], and other financial institutions [OFI]) financial intermediaries.

Main findings

Our main findings are as follows. We can confirm expectations of significant "substitution effects" between the banking (MFI) and the "shadow-banking" (OFI) sector. Based on simple risk metrics derived from sectoral balance-sheet data, we also document a decline in the MFI sector, having been compensated mostly by a higher activity level of OFIs. As a result, the overall size of the financial intermediation sector has remained largely constant (see Figure 1).

Secondly, while accounting-based measures do not appear to be useful as indicator variables for financial supervisors, our risk-adjusted measures are. Their evolution can be straightforwardly linked to economically pertinent changes in regulatory or monetary background conditions (such as the OMT announcement by the President of the ECB, Mario Draghi in August 2012, with its dramatic effect) in an intuitive manner and they tend to point to challenging dynamics before these have become plainly obvious (see Figure 2).

Thirdly, our risk-adjusted measures indicate that the resilience of all financial sub-sectors has increased in recent years. Moreover, asset volatility is shown to play a very important role, implying that increased uncertainty in financial markets can lead to sudden and substantial deteriorations in financial stability. Moreover, there are first indications of an increase in default risks occurring at the end of the sample period (see Figure 2).

Overall, our analyses suggest that while the financial intermediation sector has become more resilient over the course of recent years a number of potential cracks show – indicating a need for careful monitoring.

References

de Rougemont, P., Winkler, B. (2014)
"The financial crisis in the light of the euro area accounts: selected issues",
Winkler, B., van Riet, A., Bull, P. (eds.), A flow-of-funds perspective on the financial crisis. –Vol. II: Macroeconomic imbalances and risks to financial stability, pp. 155-198.

Merton, R. C. (1995)
"A Functional Perspective of Financial Intermediation",
Financial Management, Vol. 24, Issue 2, pp. 23-41.

The full paper is available at:
www.safe-frankfurt.de/macro-financial-stability

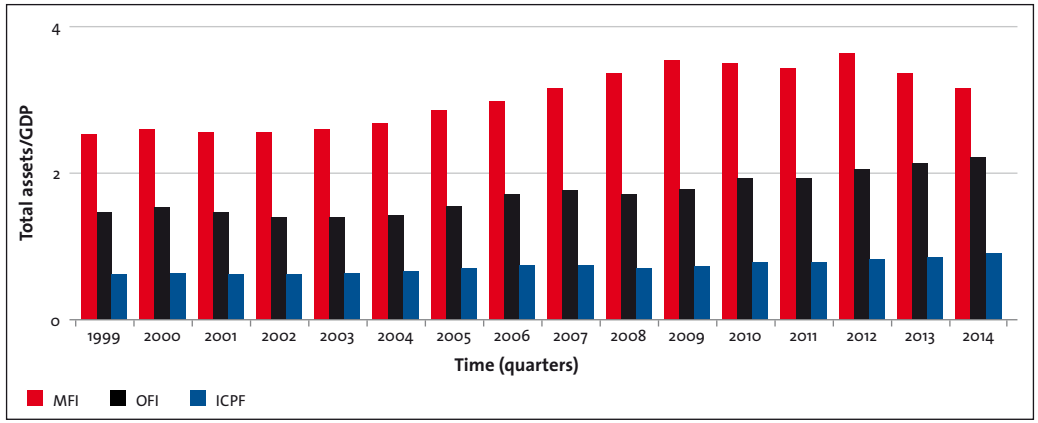


Figure 1: Size of bank and non-bank financial intermediaries. Total assets (normalized by GDP) of euro area's monetary financial institutions (MFI), insurance corporations and pension funds (ICPF) and other financial institutions (OFI).

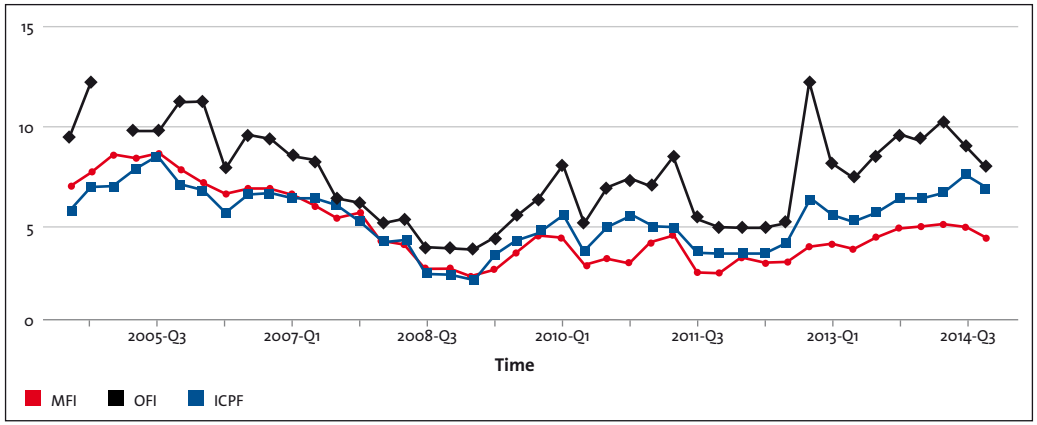


Figure 2: Distance-to-distress measures for MFI, ICPF and OFI. The distance-to-distress measure is negatively related to the likelihood of the debt level of a sector exceeding the value of its assets, i.e. having a negative net worth. Larger values thus indicate lower distress probability.

SAFE Summer Academy 2015

On 22 and 23 September, the SAFE Policy Center held its 3rd SAFE Summer Academy entitled "Banks and markets in Europe's financial architecture" at the Representation of the State of Hessen to the EU in Brussels. Pictured are Tobias Tröger (Goethe University and SAFE), Sabino Fornies Martinez (DG FISMA, European Commission), Jan Pieter Krahnen (Goethe University and SAFE), Eleni Angelopoulou (European Central Bank) and Samy Harraz (Single Resolution Board) at a panel on "SSM & SRM – Implementation Challenges" (see also p. 3).

Stephen A. Ross receives Deutsche Bank Prize in Financial Economics 2015

On 24 September 2015, Stephen A. Ross, Franco Modigliani Professor of Financial Economics at the MIT Sloan School of Management, received the Deutsche Bank Prize in Financial Economics. The Center for Financial Studies (CFS), that awards the prize biannually in partnership with Goethe University Frankfurt, honored Ross with a symposium entitled "What Market Prices Tell Us". Among the highly distinguished speakers that were invited to discuss Ross's work, its relevance and its contribution to the global financial industry and academic world, were the Nobel Laureates Eugene F. Fama and Robert C. Merton. "We feel privileged to have gathered some of the world's most distinguished researchers for our symposium in honor of Stephen A. Ross," Jan Pieter Krahnen, Director of the CFS said. "This underlines Ross's fundamental contributions to the analytical development of financial economics and attests to the international reputation of the award."

Ross's wide range of research interests includes the economics of uncertainty, corporate finance, decision theory and financial econometrics. He is the inventor of the Arbitrage Pricing Theory, the Theory of Agency and the Recovery Theory. He is further the co-creator of Risk-Neutral Pricing and of the Binomial Model for Pricing Derivatives. Ross's work has been central to the modern analysis of term structure models and his theories provide standards for pricing in major securities trading firms, useful for retirement accounts and for new financial products that may allow households to insure a wider range of risks.

How to Reform German Fiscal Federalism?

The legal basis for the current German fiscal equalization scheme among German federal states will expire in 2019. What can Germany learn from other federal countries, such as Switzerland, for the required reorganization? On 15 September, this question was discussed by Swiss and German experts at an event that was jointly organized by the SAFE Policy Center, the Consulate General of Switzerland in Frankfurt and the Hessian Ministry of Finance. In her welcoming remarks, Bernadette Weyland (see photo), State Secretary of the Hessian Ministry of Finance, expressed the hope that Germany can learn from Switzerland which managed to reform its equalization scheme in 2007. The Swiss Consul General Markus Meli stressed that the aim of this reform was to reduce but not to eliminate the differences in financial strengths between the cantons.

According to Lars Feld, Professor for Economic Policy at the University of Freiburg, the Swiss reform process was successful mainly due to the economically difficult situation in Switzerland in the 1990s which had increased reform pressure. Alfons Weichenrieder, Professor of Economics and Public Finance at Goethe University and Principal Investigator in SAFE, criticized that the debate about the German fiscal equalization scheme is focusing mainly on the horizontal tax equalization while the preceding distribution of sales tax revenues among states is hardly taken into account. Both academics were joined at a panel discussion by Pascal Utz from the Swiss Federal Department of Finance and Peter Mischler from the Conference of Cantonal Finance Directors.

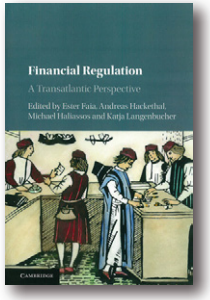
SAFE Hosted International Research Conferences

The Research Center SAFE hosted two international research conferences from 10 to 12 September at Goethe University Frankfurt. The first, on "Behavioral Aspects of Macroeconomics and Finance", was organized together with the Complexity Lab in Economics at Università Cattolica del Sacro Cuore in Milan and the University of Amsterdam. Its objective was to bring together researchers working on behavioral aspects of macroeconomics and finance such as decision-making under incomplete information and with imperfect cognitive ability, expectation formation mechanisms, diversity of beliefs, information diffusion and learning.

The 6th European Conference on Household Finance was organized by SAFE together with the Copenhagen Business School, the Einaudi Institute for Economics and Finance (EIEF), HEC Paris and the Swedish House of Finance. Its objective was to present state-of-the-art empirical research and empirically motivated theoretical research on household financial behavior and on how this is influenced by other choices, government policies and the overall economic environment. To benefit from the international audience from both fields, a joint session was held on 11 September that featured papers on behavioral aspects of household finance.

Financial Regulation: A Transatlantic Perspective

Edited by Ester Faia, Andreas Hackethal, Michael Haliassos, Katja Langenbucher



Faia, E., Hackethal, A., Haliassos, M., Langenbucher, K. (eds.):
"Financial Regulation: A Transatlantic Perspective",
Cambridge University Press, 2015, £79.99,
ISBN: 9781107084261.

Just as we are approaching the first anniversary of the implementation of the Single Supervisory Mechanism (SSM), the first and central pillar of the European banking union, appears a comprehensive book volume, edited by Ester Faia, Andreas Hackethal, Michael Haliassos and Katja Langenbucher, all professors at Goethe University Frankfurt, with assessments of the far reaching reforms of financial regulation currently being implemented in Europe. The creation of the book "Financial Regulation: A Transatlantic Perspective" was supported by the SAFE Policy Center and the Center for Financial Studies. The volume, published by Cambridge University Press, provides readers with an overview of the recent changes in regulation of the financial sector, an assessment of the interplay with monetary policy, and how the two affect the lending, saving and borrowing behavior of banks and households.

The book features contributions from renowned scholars from the fields of economics and law as well as from practitioners active in the reform developments. It takes a broad perspective by focusing both on financial institutions as well as households. A crucial aspect of the book is that it offers some comparison between the European experience of the financial crisis and subsequent changes in financial regulation and those of other countries, in particular Anglo-Saxon ones.

While there are differences between the reforms undertaken in continental Europe and those envisaged, for instance, in the United States with the Dodd Frank Act, there are also many similarities. The first part of the book highlights reforms which, in both jurisdictions, are based on the common understanding that curtailing systemic risk in financial markets requires a shift of focus from micro- to macro-prudential regulations. A strengthening of the capital and liquidity requirements are further common aspects of regulation in Europe and in the U.S. Other similarities emerge in more specific aspects of the financial reforms.

One example for this is the design of bail-in clauses. Both Europe and the U.S. have chosen to design their resolution mechanisms with bail-in clauses that are based on a single point of entry approach (i.e. the parent holding company of large banking groups is responsible for putting up, up-front, enough capital for all foreign activities and branches). In the case of the U.S., this serves the purpose of limiting the scope of regulatory arbitrage via activities overseas, while in the case of Europe, it serves the purpose of limiting the scope of risk taking in periphery and more fragile countries.

In its second part, the book sets a pathway for a gaping hole in the current apparatus of European regulation, namely provisions for investors' protection. Indeed, while the U.S. Dodd-Frank Act in its Title IX introduces norms and regulations for investors' protection, Europe still features a quite fragmented and insufficient map for regulation on how investors and borrowers can be protected from inappropriate financial products or uninformed usage thereof. These aspects, as the ones relating to bank regulation, have very important legal implications, many of which are discussed throughout the volume.

The process of financial regulation in Europe is proceeding at impressive pace. The research-based analyses in the book will help readers to understand the conflicting priorities and complicated decisions in the process of framing the new European architecture for finance and whether the new legislation can be expected to make the financial system more stable and to ultimately foster growth and prosperity in Europe.

The book will be presented by Mario Nava, Director Regulation and Prudential Supervision of Financial Institutions, European Commission, at the House of Finance on November 11th.

Selected Publications

Branger, N., Kraft, H., Meinerding, C. (2015)
"The dynamics of crises and the equity premium",
forthcoming in Review of Financial Studies.

Branger, N., Schlag, C., Wu, L. (2015)
"'Nobody is Perfect': Asset Pricing and Long-Run Survival When Heterogeneous Investors Exhibit Different Kinds of FIltering Errors",
forthcoming in Journal of Economic Dynamics and Control *(see pp. 6-7)*.

Faia, E., Hackethal, A., Haliassos, M., Langenbucher, K. (eds., 2015)
"Financial Regulation: A Transatlantic Perspective",
Cambridge University Press *(see p. 13)*.

Gomber, P., Sagade, S., Theissen, E., Weber, M., Westheide, C. (2015)
"Anonymity and Immediacy: Distinct Dark Markets and the Determinants of their Trading Volume",
Financial Management Association Annual Meeting (FMA 2015), Orlando, Florida, USA.

Götz, M., Laeven, L., Levine, R. (2015)
"Does the Geographic Expansion of Banks Reduce Risk?",
forthcoming in Journal of Financial Economics.

Haar, B. (2015)
"Binnenmarkt und europäisches Gesellschaftsrecht in der aktuellen Rechtsprechung des EuGH",
Zeitschrift für Gemeinschaftsprivatrecht, Vol. 13, Issue 5, pp. 238-245.

Hüser, A.-C. (2015)
"Too Interconnected to Fail: A Survey of the Interbank Networks Literature",
Journal of Network Theory in Finance, Vol. 1, Issue 3, pp. 1-50.

Siekmann, H. (2015)
"The Legality of Outright Monetary Transactions (OMT) of the European System of Central Banks",
F. Rövekamp, M. Bälz, H. G. Hilpert (eds.), Central Banking and Financial Stability in East Asia, pp. 101-123.

Stoyanova, R., Schlütter, S. (2015)
"Safety versus Affordability",
Journal of Insurance Regulation, Vol. 34, No. 1.

Tröger, T. (2015)
"Durchsetzung der Vorstandshaftung (Enforcing Directors' Liability)",
Zeitschrift für das gesamte Handelsrecht und Wirtschaftsrecht (ZHR), Vol. 178, pp. 453-489.

Wandt, M. (2015)
"Prämienanpassung in der Lebensversicherung zum Ausgleich niedriger Kapitalerträge des Versicherers?",
Versicherungsrecht (VersR), pp. 918-927.

Recent SAFE Working Papers

No. 116 **Gottlieb, C.**
"On the Distributive Effects of Inflation"

No. 115 **Fagereng, A., Gottlieb, C., Guiso, L.**
"Asset Market Participation and Portfolio Choice Over the Life-Cycle"

No. 114 **Branger, N., Schlag, C., Wu, L.**
"'Nobody is Perfect': Asset Pricing and Long-Run Survival When Heterogeneous Investors Exhibit Different Kinds of Filtering Errors"

No. 113 **Brüggemann, B., Yoo, J.**
"Aggregate and Distributional Effects of Increasing Taxes on Top Income Earners"

No. 112 **Hebous, S., Weichenrieder, A. J.**
"On Deficits and Symmetries in a Fiscal Capacity"

Events

November

Monday, 2nd
9.00 am – 5.00 pm
ILF Conference
One Year of SSM: Effective and Efficient Supervision in a Volatile World?
co-organized with Hengeler Mueller

Tuesday, 3rd
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Dan Silverman, Arizona State University

Tuesday, 3rd
4.15 pm – 5.30 pm
Finance Seminar – joint with SAFE
Speaker: Christian Leuz, Chicago Booth School of Business

Wednesday, 4th
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Yuriy Gorodnichenko, University of Berkeley

Friday, 6th
3rd Frankfurt Conference on Financial Market Policy
Digitzing Finance

Monday, 9th
1.00 pm – 2.30 pm
CFS Lecture
Asian Economic Outlook and the Role of the Asian Development Bank
Speaker: Takehiko Nakao, Asian Development Bank

Monday, 9th
5.00 pm – 6.30 pm
CFS Lectures on Risk & Regulation
Der Einheitliche Abwicklungsmechanismus (SRM): Anforderungen, Instrumente und Praxiserfahrungen
Speakers: Ulf Bachmann, Erste Abwicklungsanstalt, Karsten Paetzmann, BDO

Tuesday, 10th
10.00 am – 11.30 am
SAFE/CFS/Bundesbank Lecture
Rules of the Game in the Global Financial System
Speaker: Raghuram Rajan, Reserve Bank of India

Tuesday, 10th
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Damjan Pfajfar, Federal Reserve

Tuesday, 10th
4.15 pm – 5.30 pm
Finance Seminar – joint with SAFE
Speaker: Per Strömberg, Stockholm School of Economics

Wednesday, 11th
6.15 pm – 7.45 pm
SAFE/CFS Book Presentation
Financial Regulation: A Transatlantic Perspective
Speaker: Mario Nava, European Commission

Thursday, 12th
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Benjamin Moll, Princeton University

Monday, 16th
6.30 pm
Frankfurter Vortrag zum Versicherungswesen
Prüfung Solvenzbilanz
Speaker: Andreas Freiling, Ernst & Young

Tuesday, 17th
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Adam Gulan, Bank of Finland

Tuesday, 17th
4.15 pm – 5.30 pm
Finance Seminar – joint with SAFE
Speaker: Tobias Berg, University of Bonn

Wednesday, 18th
12.15 pm – 1.45 pm
SAFE Policy Center Lecture
Financial Globalization: How Central Banks and Supervisors Should Coordinate, Cooperate and Communicate
Speaker: Masaaki Shirakawa, Aoyama-Gakuin University

Monday, 23rd
9.45 am – 6.30 pm
ILF Conference
Bank Culture and Ethics

Monday, 23rd
12.00 pm
IMFS Working Lunch
Speaker: Stavros Gadinis, University of California, Berkeley

Tuesday, 24th
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Marcelo Pedroni, University of Amsterdam

December

Tuesday, 1st
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Georgi Korchakov, University of Konstanz

Tuesday, 1st
4.15 pm – 5.30 pm
Finance Seminar – joint with SAFE
Speaker: Andrea Gamba, Warwick Business School

Monday, 7th
1.00 pm – 2.30 pm
SAFE Policy Center Lecture
Expected Credit Loss Accounting: A Key to Financial Stability?
Speaker: David Grünberger, Austrian Financial Market Authority

Monday, 7th
5.00 pm
EFL Jour Fixe
Do Local Experiences Affect Investor Portfolios?
Speaker: Christine Kaufmann, E-Finance Lab

Tuesday, 8th
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Philippe Andrade, Banque de France

Tuesday, 8th
4.15 pm – 5.30 pm
Finance Seminar – joint with SAFE
Speaker: George Pennacchi, University of Illinois

Tuesday, 8th
6.00 pm – 7.30 pm
CFS Lecture
Speaker: Christof Mascher, Allianz SE

Wednesday, 9th
12.00 pm
IMFS Working Lunch
Speaker: Katharina Pistor, Columbia Law School

December, 11th – January, 23rd
GBS Open Program
Derivatives and Financial Engineering
Speaker: Christian Schlag, Goethe University

December, 11th – January, 23rd
GBS Open Program
Alternative Investments
Speaker: Uwe Walz, Goethe University

Tuesday, 15th
2.15 pm – 3.45 pm
Frankfurt Seminar in Macroeconomics – joint with SAFE
Speaker: Markus Poschke, McGill University

Tuesday, 15th
4.15 pm – 5.30 pm
Finance Seminar – joint with SAFE
Speaker: Franzisco Urzua Infante, Rotterdam School of Management, Erasmus University

Please note that for some events registration is compulsory.

CFS Center for Financial Studies
EFL E-Finance Lab
GBS Goethe Business School
ILF Institute for Law and Finance
IMFS Institute for Monetary and Financial Stability

CENTER FOR FINANCIAL STUDIES

GOETHE UNIVERSITÄT FRANKFURT AM MAIN

LOEWE
Exzellente Forschung für Hessens Zukunft

SAFE | Sustainable Architecture for Finance in Europe
A Cooperation of the Center for Financial Studies and Goethe University Frankfurt