



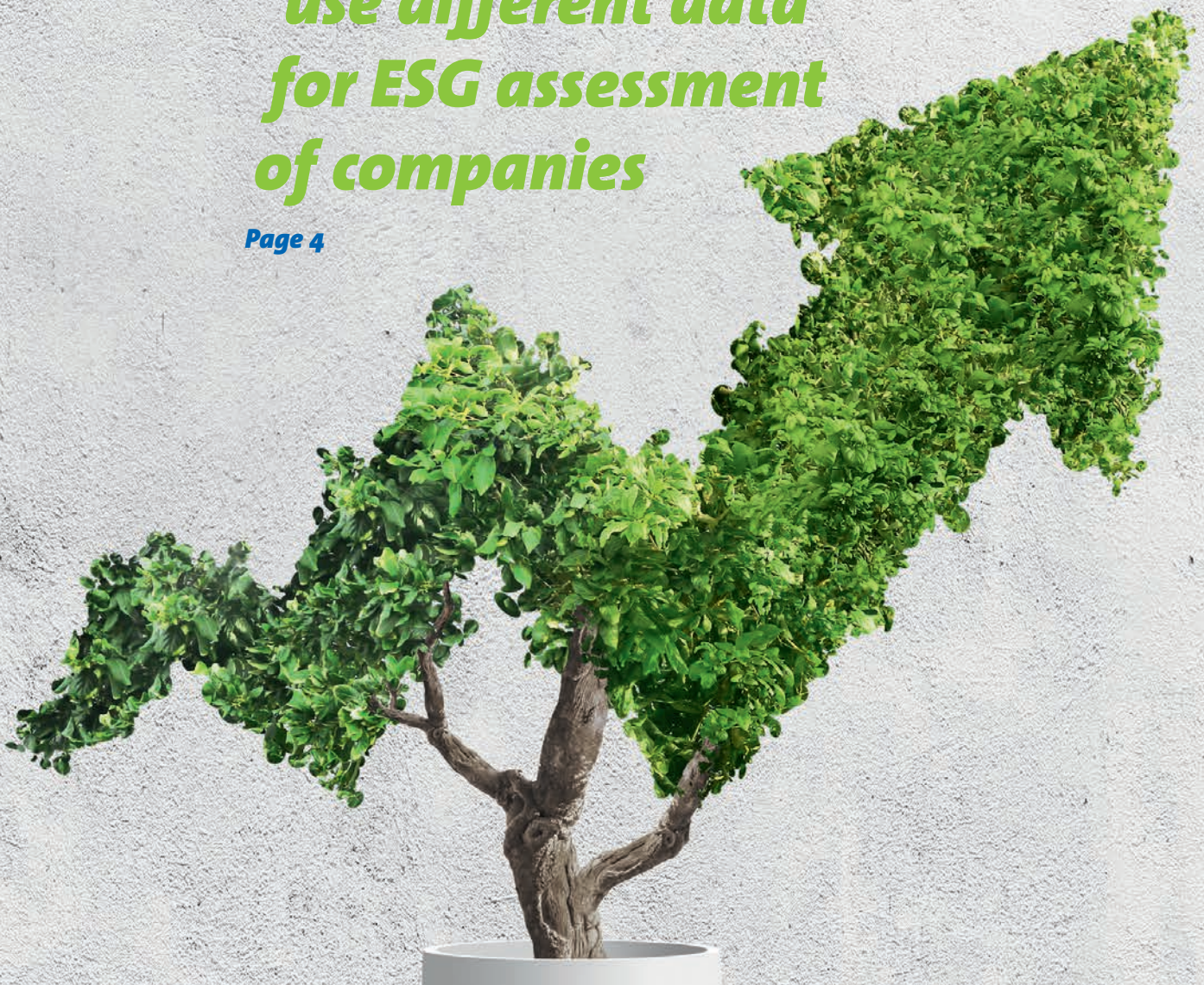
2023

# Points.

THE MAGAZINE OF THE LEIBNIZ INSTITUTE FOR FINANCIAL RESEARCH SAFE

*Sustainable finance –  
rating agencies  
use different data  
for ESG assessment  
of companies*

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### PUBLISHER

Leibniz Institute for Financial Research SAFE  
Sustainable Architecture for Finance in Europe

Management Board:  
Prof. Dr. Florian Heider  
Prof. Dr. Uwe Walz  
Dr. Muriel Büsser

House of Finance  
Theodor-W.-Adorno-Platz 3  
60323 Frankfurt am Main · Germany  
info@safe-frankfurt.de

### EDITORS

Hannah Erb  
Sarah Greifeld  
Felix Kretz

### DESIGN

Stählingdesign

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### PHOTO CREDITS

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Dear readers,

As you will probably have guessed on seeing a new face on this page, SAFE continues to develop and evolve. In the first issue of our magazine “Points”, it was Jan Pieter Krahn who gave you an impression of the steps SAFE had taken in 2021 since coming under the umbrella of the Leibniz Association and what was upcoming in 2022. And indeed late last year, there was a change in the scientific directorship at SAFE as, on 1 December 2022, I had the privilege of taking the helm at this institute so well equipped to address all manner of pressing issues in finance. In a joint interview in this second issue of “Points”, Jan and I discuss some of the matters that concern us as researchers at SAFE and the institute’s strong position to provide insights into financial markets.

Crises tend to occur simultaneously – or at least in close succession – and so there often is no “quiet time” to prepare for them. Currently, for instance, we are dealing with the sudden advent of a full-blown war in the Ukraine, with all its devastating consequences, as well as the long-term climate crisis in need of urgent solutions and lessons learned from recent turbulence in the banking sector. There is the danger that focusing on the most obviously pressing issue, the war, will divert our attention away from addressing the problem of climate change, which represents an epochal challenge for current and future generations.

What contribution can a research institute like SAFE make here? Our current issue, which focuses on Sustainable Finance, seeks to address this question.

For example, researchers from our Financial Markets department have looked at how ratings agencies use various types of data to give companies ESG scores. In another research project, the department is investigating the financing of low-emissions vehicles through bank lending. Researchers from SAFE’s Household Finance department, meanwhile, are working with colleagues at other institutions to examine what influences decisions for sustainable investment products.

In this second issue of “Points”, we also would like to introduce you to the people behind our research, and so offer portraits of some of our researchers: read about how they came to SAFE and how they approach their work. Our Policy pages focus on potential problems in the banking sector, documenting what we know about the strengths and weaknesses of institutional protection schemes and who holds bail-in-able securities in Europe.

So, without any further ado, let’s get to the point!

*Florian Mueck*



FOCUS



RESEARCH



INTERVIEW



POLICY



INSIDE SAFE



EVENTS



PUBLICATIONS



As environmental, social, and governance (ESG) factors play an increasingly important role in assessing corporate performance, several rating agencies have specialized in assessing companies' adherence to them. SAFE provides an overview of the different data sources and methods used in this process.

## Sustainable finance – rating agencies use different data for ESG assessment of companies

The SAFE Working Paper No. 349 is available here:



<https://ssrn.com/abstract=4093838>



ESG is comprised of three pillars: environmental, social, and governance. Environmental criteria relate to ecological footprint of companies – greenhouse gas emissions, water and energy efficiency, waste management, and the use of renewable energies, for instance – while social criteria document companies' treatment of customers and employees in areas such as diversity, human resources development, job security, human rights, and transparency in supply chains. Finally, the governance criteria reflect companies' management structures and their level of efficiency, taking account of employee and board remuneration, bribery, fraud and corruption, and shareholder rights.

As the fact that environmental, social, and governance criteria are now included in general assessments of companies shows, sustainable finance is no longer a niche topic. Initially, however, it was primarily smaller rating agencies which specialized in ESG factors. Yet as the importance of ESG criteria in corporate assessment and financial reporting have increased in recent years, the three major rating agencies Moody's, Standard & Poor's and Fitch have also entered the market, mostly through mergers and acquisitions of existing ESG rating providers.

## CONSIDERABLE DIFFERENCES IN RATING METHODS

Given the rapidly-evolving sectoral specificities, it is not surprising that many investors bemoan a complex and confusing ESG data environment. Whereas international accounting standards define companies' disclosure of financial information, non-financial data such as ESG information has, until recently, remained comparatively unstructured. For this reason, some organizations have committed themselves to the explicit goal of standardizing non-financial reporting. At present, the primary frameworks aiming to guide ESG reporting are the Carbon Disclosure Project, the Climate Disclosure Standards Board, the Global Reporting Initiative, the International Integrated Reporting Council, the Sustainability Accounting Standards Board, and the Task Force on Climate-related Financial Disclosures. However, there are still no globally recognized standards providing a clear assessment of corporate sustainability.

Working with Monica Billio, Michele Costola, and Iva Hristova from Ca' Foscari University of Venice, SAFE researchers Carmelo Latino and Loriana Pelizzon have produced an overview paper summarizing the current state of international research on this topic. The academic work analyzed as part of the study addresses a wide range of aspects relating to ESG practices and their implications on risk; the providers considered are MSCI, Vigeo Eiris (Moody's), Thomson Reuter Refinitiv, Sustainalytics, ISS, RobecoSAM (S&P), Bloomberg, and FTSE Russell.

In their paper, the researchers show that, while there are many similarities in the ESG assessment methods applied by the rating agencies studied, these methods also differ considerably from one another. The differences are evident not only in the way different ESG criteria are selected, but also in how each of the three ESG pillars are weighted – or even, in some instances, included or excluded from assessment.

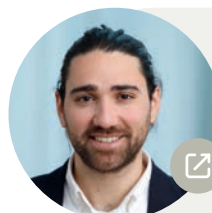
## HIGH DEGREE OF VARIATION BETWEEN INDUSTRIES

Most of the rating providers use data publically available in governmental and non-governmental databases or provided by NGOs. Although corporate disclosure remains the primary source of information, certain rating agencies like RobecoSAM base their scores on survey results, while others such as ISS conduct stakeholder interviews or directly engage with companies (e.g. Bloomberg and FTSE Russell).

Most rating agencies include industry-specific metrics in their assessments to reflect the fact that conditions vary widely by industry. For mining companies, for example, the preconditions for sustainable business are completely different to those for banks.

Furthermore, climate change risk can affect companies directly through physical damage and indirectly through transition processes such as stranded assets and reputational damage. For some sectors of the economy, this climate risk may be limited: due to their dependence on fossil fuels, sectors such as coal and steel are excluded wholesale. In this regard, the authors found that not only does each rating agency rely on its own definition of materiality, but also that the number of industries considered varies across agencies (see table below); this ultimately determines the weighting given to each ESG issue in the overall rating. Taken together, these differences lead to divergence in the final ratings and a frequently-observed degree of heterogeneity.

Overall, the amplification effects can be significant and have potential consequences not only for economic and financial stability, but also for empirical academic research whose results are strongly dependent on the ESG ratings used to conduct analysis. To this end, the literature reviewed by the researchers at SAFE and the University of Venice is consistent in emphasizing the need for adjusted valuation frameworks and an improved disclosure process to help address insufficient data availability. In addition, timely and smooth measures for a low-carbon transition are recommended.



**Carmelo Latino**

is Doctoral Student in the Department Financial Markets at SAFE.

<https://safe-frankfurt.de/carmelo-latino>



**Loriana Pelizzon**

is Director of the Department Financial Markets at SAFE and Professor of Law and Finance at Goethe University Frankfurt.

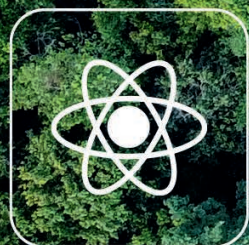
<https://safe-frankfurt.de/loriana-pelizzon>



# Financing transformation



The goal of reaching carbon neutrality by 2050 requires both rapid scaling up of green economic activities and decarbonization in emissions-intensive sectors. In supporting this transformation, the financial sector has a decisive role to play, and two research projects starting in 2022 with SAFE involvement are dedicated to this point.



A better understanding of which companies are pursuing a reliable transformation path represents an important prerequisite for steering financial flows towards carbon neutrality. Therefore, it is necessary to analyze which indicators investors can use to assess the degree to which a given company's self-imposed goal of "climate neutrality by 2050" represents a serious undertaking.

Precisely this kind of analysis is what "ClimLabels: Transformation Labels in Climate Finance", a project in the research network around Christine Laudenbach, Director of SAFE's Research Department Household Finance, the Universities of Bochum and Münster, and the sustainable finance think-tank Climate & Company, aims to make possible. To make climate-related information better available for investment decisions, the network aims to design what it refers to as 'ecolabels' for financial products as a kind of seal of approval providing investors with information about the sustainability of investment products.

In this way, the project is developing incentives for CO<sub>2</sub> emissions reduction based on robust transformation indicators aligned with the requirements of financial experts such as investors, traders, and fund managers; and to this end, the research network seeks to gain a better understanding of the metrics on which transformation indicators and ecolabels are built.

To reach this more comprehensive position, empirical analyses of the configuration and clarity of ecolabels will be conducted, as will laboratory experiments and field studies of individual decisions and market behavior. In this process, SAFE is responsible for the design, programming, implementation, and evaluation of the field experiments with bank customers. The project will receive a three-year grant from the Climate Protection and Finance initiative KlimFi (*Klimaschutz und Finanzwirtschaft*) as part of the Research for Sustainability/FONA strategy framework funded by the German Federal Ministry of Education and Research.

## FINANCING LOW-EMISSION VEHICLES THROUGH BANK LENDING

Under the KlimFi funding initiative, the German Federal Ministry for Education and Research also awarded a grant for a team of SAFE researchers and the Securitisation Repository European DataWarehouse (EDW) to undertake a three-year project to promote the asset-backed securities (ABS) market in green automotive.

Called "Green Auto Securitisation" (GAS), this project aims to create meaningful incentives for the automotive industry, as well as stakeholders and end users,

to design a framework for a green finance mechanism which supports financing for low-emission vehicles (LEVs) through bank lending. In this project, SAFE will be responsible for carrying out an in-depth analysis of the probability of default among electric vehicle owners as against other drivers across countries and build years; the aim of this will be to develop an appropriate risk framework with specific incentives.

More specifically, the GAS project will contribute to KlimFi objectives by proposing a framework for new climate-friendly products and by improving data quality and availability with a mock-up database for ESG information. The database will facilitate reporting of ESG-related information at single exposure level and, beyond this, support the addition of manufacturers' ESG ratings and details on car emissions and characteristics to loan and lease-level data. In this context, EDW will develop the ESG database as a tool for studying the nascent market for green auto loans/leases and for the development of corresponding credit risk models, thus enabling the researchers – Loriana Pelizzon, Director of SAFE's Financial Markets Research Department and SAFE Postdoctoral Researcher Max Riedel – to deliver reliable research results.

More information on SAFE research and project activities in sustainable finance can be found on our topic page:



<https://safe-frankfurt.de/research/sustainable-finance>





Debating sustainability standards (left to right): Patrick de Cambourg (EFRAG), Sven Gentner (EU Commission), Sue Lloyd (ISSB), Martin Moloney (IOSCO), and SAFE's Founding Director em. Jan Pieter Krahnem.

## Establishing sustainability standards

Details and video recordings of the conference panels, keynote, and debate can be found here:



<https://safe-frankfurt.de/research/frankfurt-panel-on-sustainability-research>



The consequences of climate change represent a threat to financial stability. At the first Sustainability Standards Watchers Conference, hosted by SAFE in 2022, academics and practitioners discussed how to make the impacts of climate change measurable in order to deliver data and metrics which can be used to define binding global sustainability standards.

One of the main purposes of the conference was to shed light on the process of sustainability standard setting. Held in mid-July 2022, the event was scheduled to take place after the consultation period of the International Sustainability Standards Board (ISSB), a standard-setting body based in Frankfurt which aims to enable investors in capital markets to take decisions with the best possible degree of transparency vis-à-vis specified disclosure obligations. The Sustainability Standards Watchers Conference therefore provided a forum for dialogue among international finance scholars, climate and ecosystem scientists, and lawyers on the one hand and representatives from the financial industry, policy makers, central banks, and the ISSB on the other.

Held in a hybrid format, the day-long conference was organized by the Frankfurt Panel on Sustainability Research (FPSR), a newly founded association of researchers from SAFE, the Goethe University Frankfurt, the Senckenberg Biodiversity and Climate Research Center (SBIK-F), and the Potsdam Institute for Climate Impact Research (PIK). Designed as platforms for a science-based critical assessment and evaluation of sustainability standards, the discussions brought together key stakeholders for the first time to address concrete issues.

Three interdisciplinary panel discussions centered around four key questions that addressed the impact of ecological standards for corporations and capital providers, with the speakers focussing on the purpose of and the conditions for effective international ecological standard-setting in today's societies and economies – and their effect on biodiversity.

### GREEN STOCKS AS A HEDGE AGAINST CLIMATE RISK

Their keynote speech on how increased climate concerns account for high returns in green assets was given by Robert F. Stambaugh, Professor of Finance at the Wharton School of the University of Pennsylvania. When surveyed, investors and asset managers often predict superior future performance for green stocks

relative to brown stocks, but past results may not be indicative of future performance, Stambaugh stated in his speech. Green stocks could nevertheless, in his view, be a better hedge against climate risk; furthermore, in view of increasing concern about climate change, actual returns could be higher for green stocks, he added.

In combination with the panel discussions, Stambaugh's keynote made clear that, in addition to scientific expertise, an enormous effort from policymakers, regulators, and stakeholders is needed – and that time is of the essence. Contrary to the previous rules of the game, several different standard-setting processes now need to be handled quickly at the same time, some of which have yet to be set and coordinated between various remit-holders.

These processes were the subject of the closing debate at the end of the conference. Moderated by SAFE's Founding Director emeritus Jan Pieter Krahn, this podium discussion featured guests from the European Financial Reporting Advisory Group (EFRAG), which provides technical expertise to the EU Commission in the process of adopting International Financial Reporting Standards (IFRS), the EU Commission itself, the ISSB, and the International Organization of Securities Commissions (IOSCO). What became apparent was that competing institutions must coordinate and cooperate in setting sustainability standards – a task still some way off completion.



Discussing measures required by investors to deal with the systemic risk of climate change (left to right): Almut Arneth (Karlsruhe Institute of Technology), Tobias Tröger, Director of SAFE's Cluster Law and Finance, Jeffrey Gordon (Columbia University, on screen), Lucrezia Reichlin (London Business School and International Financial Reporting Standards Foundation), and Maximilian Horster (Head of ISS ESG at Institutional Shareholder Services Inc.).



## Financial crisis, creditor-debtor conflict, and populism

The paper is available here:



<https://doi.org/10.1111/jofi.13138>

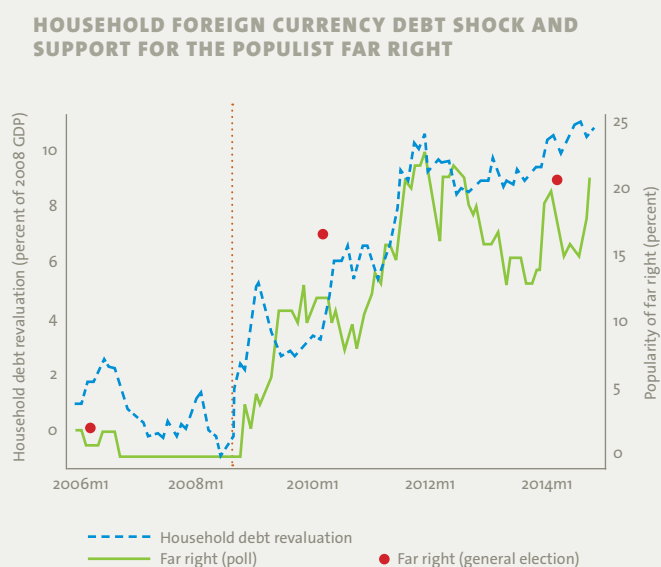


Financial crises are often followed by political polarization and increased support for populist parties. Many such crises entail significant distress to household finances, especially among debtors. In their research paper “Financial Crisis, Creditor-Debtor Conflict, and Populism”, published in the *Journal of Finance*, the authors investigate the relationship between debtor distress and support for

a populist far-right political party during the 2008 financial crisis in Hungary. Their results show that financial difficulty led to a significant and persistent increase in support for the far-right populist Jobbik.

To establish a causal relationship between debtor distress and voting for a populist party, the authors use widespread household Swiss franc borrowing with a large and unanticipated depreciation of the domestic currency. The authors harness the fact that variation in foreign currency debt exposure was driven by a policy change which cut back an interest rate subsidy program for local-currency mortgage loans. Combining administrative household credit registry data and election outcomes, the authors find that the household foreign-currency debt shock significantly increased the far-right populist vote share, an effect which has proved persistent across several post-crisis elections.

In order to understand why distressed debtors voted for a populist party, the authors complement their primary analysis with additional narrative evidence. Textual analysis of parliamentary speeches reveals that far-right politicians were more likely to use debtor-friendly rhetoric, emphasize debt-relief, and blame international banks, the International Monetary Fund, and establishment parties for foreign-currency debtors’ financial distress. Populists’ debtor-friendly stance fits with its broader (rhetorical) claim to speak for “the people” and against “the elite”, “the bankers”, and “international financial capitalism”.



The figure shows the increase in household debt burdens induced by the exchange rate depreciation (dashed line) and the popularity of far-right populist party Jobbik (Movement for a Better Hungary) based on polling data (solid line) and parliamentary elections (dots). The household debt revaluation is calculated as the increase in 2008 household debt induced by the exchange rate depreciation, relative to 2008 GDP. Support for the far right in polling data is based on individuals who intend to vote. The vertical line represents September 2008, the month prior to the exchange rate depreciation.



**Győző Gyöngyösi**

is Postdoctoral Researcher in the Department Household Finance at SAFE.

<https://safe-frankfurt.de/gyozo-gyongyoesi>

His co-author **Emil Verner** is an Assistant Professor of Finance at MIT Sloan School of Management.



## A corporate finance perspective on environmental policy

SAFE Working Paper No. 345 is available here



<https://ssrn.com/abstract=4065554>



In their paper “A Corporate Finance Perspective on Environmental Policy”, which has been published as SAFE Working Paper No. 345, the authors demonstrate that an optimal policy response to climate change requires consideration of firms’ financial constraints.

In order to establish an environmentally friendlier economy, legislators are increasingly demanding that firms offset the social cost of their greenhouse gas emissions – by requiring them to acquire emissions rights, for instance. Allowing these rights to then be traded means putting a price on pollution, which in turn helps to reshuffle capital away from pollution-intensive towards greener firms and sectors. However, this reallocation of resources is hampered by financial constraints: neither firms’ disposable funds nor the amount they can borrow from investors are limitless.

Since these types of frictions represent a particular constraint to green firms – which, as newcomers, often lack a track record or existing collateral – the authors suggest that policymakers can pursue the desired reallocation of resources by tailoring environmental instruments to firms’ financial constraints.

### LOWER ISSUE PRICES RECOMMENDED AGAINST FINANCIAL CONSTRAINTS IN INDUSTRIES

Employing the standard model of financial constraint by Holmström and Tirole, Heider and Inderst illustrate that

it is only optimal to uniformly price emission allowances as equal to their marginal social costs in the absence of financing constraints. In the case of industry-level financing constraints and without heterogeneity within a given industry (i.e. when all firms are equally non-green or green), the model recommends a lower price for emissions rights in a cap-and-trade system. A lower price recognizes the shadow cost of capital for firms and, by extension, the gain in consumer surplus when financial constraints are loosened.

When an industry has both non-green and green firms, however, then an environmentally-friendly capital reallocation policy requires a higher price for emissions. In this model, capital-rich legacy firms lacking in green activities must pay an emission price which exceeds their social costs: this higher price makes it expensive for them to operate; industry output and consumer surplus fall. What is more, the higher price relaxes financial constraints for green firms, which can then expand their operations and the associated gain in social surplus: producing less pollution outweighs the loss of consumer surplus.

In this way, the authors demonstrate how the green transformation of the economy – and, in particular, the cost of this transformation – can be approached from a corporate finance perspective where costs take center stage. Such a perspective is novel both from an academic and a policy perspective.



**Florian Heider**

is Scientific Director at SAFE and Professor of Finance at Goethe University’s House of Finance.

<https://safe-frankfurt.de/florian-heider>

His co-author **Roman Inderst** is Professor of Finance and Economics at the House of Finance at Goethe University Frankfurt.



## The role of disclosure in green finance

The paper is available here:



<https://doi.org/10.1093/jfr/fjac001>



In their paper on “The Role of Disclosure in Green Finance”, recently published in the *Journal of Financial Regulation*, the authors analyze how disclosure requirements may serve as an effective policy tool for promoting the green transition.

By mandating a variety of climate-related disclosures, policymakers attempt to facilitate the allocative function of financial markets to fund projects which contribute to the decarbonization of the economy. Transparency requirements, the thinking goes, will allow investors to make better financial decisions based on deeper and more comparable information about companies’ climate impact and exposure to climate risks, and these enhanced financial decisions will ultimately channel more capital into greener economic activities while defunding more polluting ones.

### IDENTIFYING PRECONDITIONS FOR ACHIEVING SUSTAINABILITY OBJECTIVES

Tröger and Steuer emphasize that this idea of market discipline as a kick-starter for the green transition is based on strong assumptions about the operation and allocative function of financial markets. They establish which preconditions have to hold for disclosure-centered green finance policies to actually contribute to the green transition. The authors find that, in principle, financial as well as non-financial considerations might increase demand for green assets to a degree which might induce at least some decarbonization of economic activities; they also explain the different ways

in which government-imposed transparency requirements might help overcome information asymmetries which – absent regulation – result in suboptimal capital allocation to green activities.

At the same time, the researchers caution that real-world investment processes may significantly deviate from micro-economic and finance models, and that it is unlikely that green finance alone will be enough to induce sufficient change to stop global warming. Hence, they stress that market-based green finance policies are only second-best solutions to deal with externalities problems such as climate change. These solutions should be used to complement, but not substitute, direct regulatory initiatives like a global carbon emissions trading scheme or a carbon tax.



**Tobias Tröger**

is Director of the SAFE Research Cluster Law and Finance and Professor of Private Law, Commercial and Business Law, Jurisprudence at Goethe University Frankfurt.

<https://safe-frankfurt.de/tobias-troeger>



**Sebastian Steuer**

is a Doctoral Student in the SAFE Research Cluster Law & Finance.

<https://safe-frankfurt.de/sebastian-steuer>

## Open banking and customer data sharing: implications for FinTech borrowers

SAFE Working Paper No. 364 is available here:



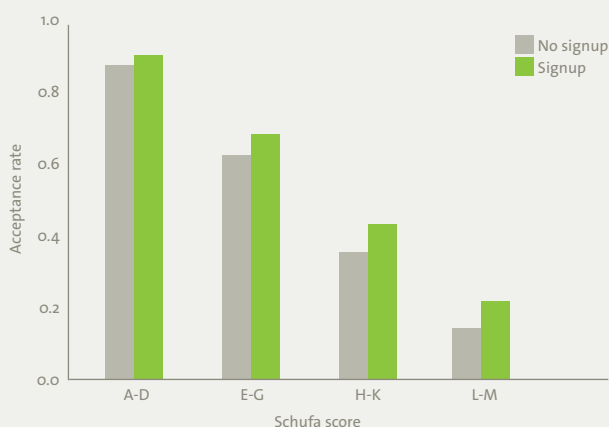
<https://ssrn.com/abstract=4278803>



In her paper “Open Banking and Customer Data Sharing: Implications for FinTech Borrowers”, which has been published as *SAFE Working Paper No. 364*, SAFE researcher Rachel Nam investigates how open banking policies affect borrowers in consumer credit markets.

Open banking policies seek to break up banks’ long-standing monopoly on their customers’ financial data by shifting data ownership from the bank to the consumer. Under open banking, consumers have greater control over their own financial data and more discretion in their decision on who to share their data with.

**LOAN ACCEPTANCE RATE BY DATA SHARING SIGNUP DECISION**



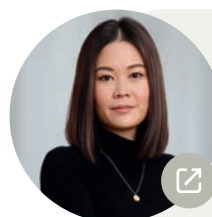
Since technology-enabled firms such as FinTech lenders can train big-data algorithms on granular financial data to improve credit quality inference and acceptance rates, open banking holds the potential to facilitate fairer and more democratic access to finance.

### RISKIER BORROWERS SHARE THEIR DATA MORE READILY

Up until now, however, the literature has not yet identified the types of customers who actually decide to share their data and whether they benefit from their decision in the loan application process.

The author responds to this gap in the existing scholarship by exploring a rich set of granular loan application data from Germany. Her findings show that it is riskier (lower credit score) borrowers who share their data more readily (a 3.8 percentage-point increase when compared to their safer counterparts). Even though borrowers across all credit risk groups benefit from sharing their financial data in the loan application process, riskier borrowers boost their chance of receiving a loan to a greater extent than safer ones, while the latter experience a larger reduction in interest rates.

On the back of her finding that customer-directed data sharing has allowed previously disadvantaged borrower groups underserved by mainstream banks to enter the consumer credit market, the author concludes that open banking policies have the potential to promote financial inclusion.



**Rachel Nam**

is Doctoral Student in SAFE’s Research Department Financial Markets.

<https://safe-frankfurt.de/rachel-nam>

## Making an impact

In her research and beyond, Christine Laudenbach aims to improve financial sophistication



For Christine Laudenbach, it is cooperation and teamwork which make her research at SAFE feel worthwhile – and provide impetus to keep it going. One example she cites are events like the panel on the gender wealth gap, where female speakers from central and private banks opened discussion on the topic to different disciplines. Indeed, her path thus far has taken her through various areas: “Originally, I wanted to study mathematics, but the school careers advisor didn’t think I’d be able to pass the university’s entrance exam and recommended a more vocational course. As it turned out, this motivated me to prove him wrong, as I would later go on to take a degree in banking!”

Before beginning her Ph.D. at the University of Mannheim in 2007, Laudenbach worked at a large German bank for a few years: “I enjoyed working there, but I felt that something was missing, and I realized I wouldn’t want to do this job forever. So, I thought that doing a Ph.D. could be right for me.” In Mannheim, her advisor led her to the area of Behavioral Finance – and she fit right in. “I still don’t see myself as a typical finance person,” she says: “In my research, I’m very interested in the decision-making process of individuals, and finance is just the context.”

**“You are often the only woman in the room”** Laudenbach’s strong interest in the gender wealth gap and gender equality in finance developed during her academic career: both topics are about why women, compared to men, still feel less confident in making sophisticated financial choices. “When you work in a very male-dominated area, which was the case for me at the bank, you are often the only woman in the room, and I thought that something had to be done to change this systematic imbalance.”

### FINANCIAL SOPHISTICATION IS KEY TO INDEPENDENCE

When Laudenbach talks to friends or acquaintances about her job, she still comes up against reserves: “I don’t understand why many people think finance is such a boring topic. Financial freedom can give you freedom in many other aspects of life, and often, a basic understanding of financial matters is crucial to attaining this goal.” As such, Laudenbach’s research focuses primarily on improving women’s financial knowledge: “I want to change things. If I can help even one person to make more informed or better financial decisions, then I’ve made an impact.”

On recent projects, she has greatly enjoyed the structures at SAFE, where she took up a professorship for Household Finance in April 2022: “I like working in teams and different groups. The interaction and range of perspectives broaden our possibilities and allow us to go new ways.” It is no surprise that Christine Laudenbach’s research led to her being included in Capital Magazine’s “Top 40 under 40” in 2022: after all, her work has been published in internationally-renowned academic journals such as the *Journal of Finance*, the *Journal of Financial Economics*, and *Management Science*. Furthermore, in 2022, she received a five-year grant from the Leibniz Programme for Women Professors for her project on the gender wealth gap. “It is always nice to be recognized for your work. When I attended the award ceremony for the Capital Top 40 under 40, I didn’t know anyone beforehand, which was unusual; but I was very grateful for the opportunity to meet new people from various backgrounds. And that’s an experience everyone should have once in a while!”

#### Christine Laudenbach

is Director of the Department Household Finance at SAFE and Professor of Finance at Goethe University Frankfurt



<https://safe-frankfurt.de/christine-laudenbach>

## At the intersection of law and finance

The current focus of Alperen Gözlügöl's research is on how law and finance can accelerate the sustainability transition



To be an academic, you need an enquiring mind – a criterion that Alperen Gözlügöl, with his passion for asking questions, certainly fulfils. “Being a researcher, I am able to explore questions that are the most interesting to me, trying to get to the bottom of things and contributing to the body of knowledge.” Often, his interests overlap with those of others all around the world: “In my work, I get to interact with scholars worldwide, which I find very valuable.” Indeed, Gözlügöl himself has a thoroughly international profile: after a bachelor's degree in law at Bilkent University in his home city of Ankara, he went on to obtain an LL.M. at the University of Cambridge, followed by a Ph.D. from the University of Hamburg.

“After finishing my Ph.D., I decided to stay in academia: among other things, it gives me the opportunity to contribute to policymaking and, in so doing, in the end – in however marginal a way – to help make the world a better place,” Gözlügöl explains. That's why after completing his degree, he decided to join SAFE. The connection to researchers and the intersection of scholars from law, finance, and political sciences fascinate him: “My work here includes not only SAFE as an institution, but also the whole law and finance cluster encompassing related centers and scholars working in the field at the House of Finance.” He feels that his research benefits from the interdisciplinary interaction and cross-pollination of ideas.

### “RESEARCH IN LAW AND FINANCE CAN CONTRIBUTE TO A MORE SUSTAINABLE WORLD”

For Alperen Gözlügöl, topicality is an important element in his work, so he is currently focussing on areas like environmental, social, and corporate governance (ESG) and corporate finance. “These are very topical issues, and it is undeniable that the world is going through a

substantial shift towards sustainability as alarm bells ring ever louder,” he explains. Although some might be skeptical, he believes that law and finance research can contribute towards a positive change: “I think finance can help to create a more sustainable world, and law has a significant role to play in facilitating this contribution.”

Overall, with a view to establishing a fairer, more efficient and effective legal infrastructure, Gözlügöl takes a practical approach, asking how the law should develop and how it fails or succeeds in achieving its goal, not what the law is. He also likes the fact that his research influences students at the university: “I enjoy teaching because it allows me not only to share my knowledge, but also to engage with young minds who will go on to play key roles in society.”

When he needs a break from working on his research, Alperen Gözlügöl can be found traveling, strolling around the city, or trying out new things. Most recently, he began reading biographies: “I find it fascinating and inspiring to read about how elements such as luck, emotions, and reasoning come together to shape what we call life.” However, he also enjoys cooking, where he can be both creative and nostalgic: having been separated from his Turkish family for long periods, he had to learn how to cook some of his childhood favorites himself: “I even got my grandmother's approval for some of them!” Every enquiring mind needs a good feed every now and then.

#### Alperen Gözlügöl

is Postdoctoral Researcher in the Cluster Law & Finance at SAFE



<https://safe-frankfurt.de/alperen-goezluogol>



## Regulating European banking networks like major banks

The SAFE White Paper No. 88 is available here:

 <https://safe-frankfurt.de/white-paper-88>



In the ongoing debate over the European crisis management and deposit insurance framework, institutional protection schemes from six member states demanded preferential regulatory treatment as, in their view, they enhanced the financial stability of banking markets. In a SAFE White Paper, researchers in economics and law undertook to analyze the role played by such schemes, scrutinizing their strengths and weaknesses, and drawing conclusions on appropriate regulation strategies.

On a general level, an institutional protection scheme (IPS) can be described as a set of mutual support promises among institutions which are members of the scheme. Such schemes have some strengths, but also several weaknesses which run counter to the argument that they promote financial stability, as has been explored in depth by Rainer Haselmann, Jan Pieter Krahnert, Tobias Tröger, and Mark Wahrenburg in analysis commissioned by the European Parliament's Committee on Economic and Monetary Affairs. Their assessment, which has now been published as a SAFE White Paper, looks into how IPS operate in the context

of the financial system as a whole, with the authors examining the two largest IPS in Europe, both located in Germany: one organized under the auspices of the Federal Association of German Cooperative Banks and another by the German Savings Banks and Giro Association.

The analysis shows that, on the one hand, customers stand to benefit from IPS because they are protected from financial losses in times of crisis. On the other hand, however, the analysis shows that financial bail-outs happen all too easily at state banks (Landesbanken), representing a burden on federal and state budgets. The researchers find that banking networks with IPS should be regulated like major banks, which are subject to European Central Bank supervision within the Single Supervisory Mechanism (SSM); this approach could eliminate the need for government aid and increase the banking market's overall financial stability. Given the considerable regulatory privileges that IPS, as they exist in Germany, enjoy, alignment with the regime applicable to major banks and centralized supervision by the ECB could prevent moral hazard.

However, the disadvantages of IPS weigh heavily, too. Ultimately, protection depends on members' approval in individual cases, conjuring up a risk of failure or unforeseen hold-ups. Moreover, IPS cover is de facto limited insofar as it cannot offer protection beyond the capital and liquidity resources the scheme has at its disposal. Given the similarity of business models within an association, diversification within networks is low. In the event of restructuring, IPS' members are largely excluded from the reach of national and European resolution authorities and their creditors do not participate in banks' losses.

The researchers believe that treating IPS in a manner equal to major banks could achieve the goal of direct ECB supervision within the SSM. This would contribute to the standardization of supervisory practices with due consideration for systemic risk. Moreover, the analysis emphasizes that well-designed integration of IPS into a European deposit reinsurance system would improve the financial stability of the entire banking market, counteract existing risks, and prevent unrestrained mutualization of risk at the European level.

#### MARKET SHARES OF DIFFERENT CATEGORIES OF BANKS FORMING AN IPS IN GERMANY

using data from 2021 Q4 (total lending)  
or December 2021 (interbank loans and deposits from non-banks)

	TOTAL LENDING	INTERBANK LOANS	DEPOSITS FROM NON-BANKS
LANDESBANKEN	5,94%	8,27%	1,02%
SAVING BANKS	29,71%	6,60%	48,91%
IPS OF SPARKASSEN-FINANZGRUPPE	35,64%	14,87%	49,93%
COOPERATIVE BANKS	22,06%	7,68%	31,96%
COMBINED IPS	57,70%	22,50%	81,89%

Source: Bundesbank time-series statistics, own calculations.

As the authors note, IPS offer three main advantages which strengthen the position of regional banks in the market: first, they have internal warning systems, potentially enabling restructuring of member banks early on in challenging situations; second, by limiting their business activities to a clearly defined region, the savings and cooperative banks concentrate sustainably on private customers and companies in their respective geographical area, thereby strengthening regional growth; third, the mutually-agreed IPS provides a protective umbrella allowing individual banks to guarantee all deposits.



**Tobias Tröger**

is Director of the SAFE Research Cluster Law and Finance and Professor of Private Law, Commercial and Business Law, Jurisprudence at Goethe University Frankfurt.

<https://safe-frankfurt.de/tobias-troeger>



## Threats to banking resolution: evaluating the retail and bank challenge

The SAFE White Paper No. 92 is available here:



<https://safe-frankfurt.de/white-paper-92>

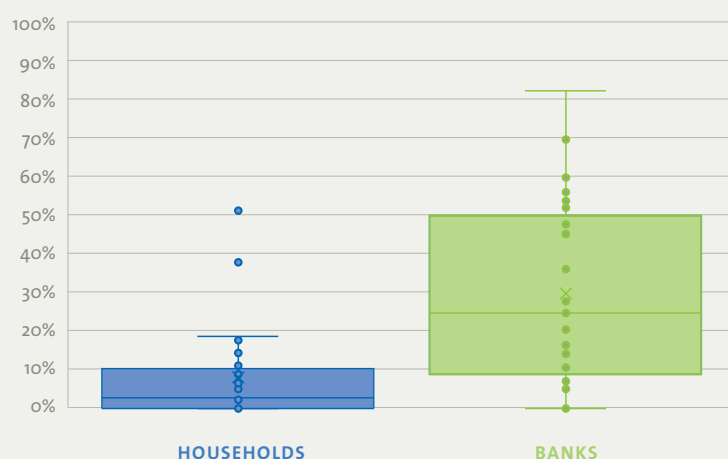


Retail holdings of bail-in-able liabilities for outlier banks come with the risk of political pressure to bail out institutions in difficulty, while high average bank crossholdings can trigger contagion effects. A SAFE White Paper sheds new light on the challenges this entails for retail investors and banks.

Following the 2008-2010 financial crisis, European banking regulation was redesigned with the aim of terminating 'too big to fail' status for large financial institutions. The new regime under the Bank Recovery and Resolution Directive (BRRD) focuses on bail-in and resolution as precautionary and crisis management tools, with market discipline exercised for the most part by the pricing of bail-in-able debt, which has to be built up fully by 2024. A key concern is whether a potential bail-in is endangered by vulnerable parties whose presence among bail-in-able debt-holders may force governments to bail them out. In a SAFE White Paper, Tatiana Farina, Jan Pieter Krahnen, Irene Mecatti, Loriana Pelizzon, Jonas Schlegel, and Tobias Tröger subject this concern to scrutiny.

Two such vulnerable groups stand out: retail investors, who are subject to government protection for political reasons, and fellow banks, which tend to be bailed out on grounds of systemic risk. Thus, for bail-in to be effective, neither retail investors nor fellow banks should hold significant fractions of any bank's bail-in-able debt.

### BAIL-IN-ABLE LIABILITY DISTRIBUTION BY HOLDERS



The figure shows a box plot (of the distribution) by holder types within the payment ranks AT1, Tier2, and subordinated and senior non-preferred liabilities. Every dot represents one of the 25 covered German banks for the year 2018. The box represents the second and third quartile (interquartile range), the middle line of the box displays the median and the x presents the average. The y-axis shows the holdings in percentage and the x-axis the holder type. Source: Meldebögen gemäß DVO 2018/1624, LDR, SHSS, BaFin's calculations

In the course of their research, the SAFE authors learned that public access to bail-in holding data is practically non-existent, with several rounds of direct and indirect communications with central banks and supervisory agencies needed to obtain the information used for the SAFE White Paper. Even more worryingly, the national and supranational supervisory and resolution agencies themselves do not have unimpeded access to data so vital for the fulfilment of their mandate.

In conclusion, the authors offer several policy recommendations regarding regulatory refinements and data disclosure.

### REGULATORY REFINEMENTS

- A boundary between bail-in and not-to-bail-in should be defined, ending the current ambiguity with respect to wholesale deposits and other debt instruments not covered by deposit insurance. The failure of Silicon Vally Bank (SVB), where ex-post guarantees were provided for ex-ante unsecured deposits, highlights this weakness.
- Minimum denomination requirements for minimum requirements for own funds and eligible liabilities (MREs) should be implemented according to BRRD Art. 44a (5) for all member states as a binding rule; this would represent a clear and easy-to-enforce restriction offering protection to retail investors.
- Supervisors should set and enforce maximum individual holdings (concentration limits) of bail-in-able debt securities for bank investors.

### DATA DISCLOSURE

- Bail-in-able debt holding data should be disclosed in full, and all debt instruments which are bail-in-able should be visibly flagged to all investors, e.g. via International Securities Identification Number (ISIN) conventions.
- A Europe-wide effort should be made to standardize, collect, and fully disclose the holding statistics for all banks individually, making them available to investors in real time from a single data repository, e.g. via the European Data Warehouse.
- Supervisory agencies, resolution agencies and central banks should all have unrestricted real-time access to bail-in-able debt holding data.



**Jonas Schlegel**

is Co-Head of the SAFE Policy Center

<https://safe-frankfurt.de/jonas-schlegel>



For the first time since it was founded in 2013, SAFE saw a change in its academic leadership as, on 1 December 2022, Florian Heider took over from Jan Pieter Krahn as Scientific Director. In this interview, they both talk about which issues have been and continue to be formative for SAFE's work – and how this shapes the institute's perspective and future.

## ***“Financial markets are economies' nervous systems”***

**Mr. Krahn, SAFE goes back to a spin-off of Goethe University Frankfurt in 2013; the institute went on to become a member of the Leibniz Association in January 2020. So, strictly speaking, it's now been a decade since the beginning of the journey ...**

**JAN PIETER KRAHNEN:** ... and we have only just begun! Our admission to the Leibniz Association in 2020 opened a new chapter by offering a long-term perspective to the founding idea of SAFE. There is a basic need to understand the dynamics and complexities of financial markets – and their perils to banks, the economy, and society at large.

**Such as?**

**JAN PIETER KRAHNEN:** Consider the global financial crisis of 2007/2008. Initially, when SAFE was mandated in the Hessian LOEWE program to carry out fundamental research on Europe's financial architecture, and assess and propose relevant policy options, what started as a banking crisis had magnified into a sovereign debt crisis and a challenge for the Eurozone as a whole. We were looking for answers to questions such as: How did a shock in the U.S. securitization market which, at its core, triggered the financial crisis turn into, first, a fiscal crisis and, following that, into a European currency crisis? What role did governments, banks, and the interactions between them play in this setting? What have the recent years of low interest rates done to banking and capital markets? And, ultimately, how can policy makers and

society more broadly tackle the systemic risks in banking and financial markets?

Since we set up, research at SAFE has been instrumental in addressing these points, and – as a regional bank in far-away Silicon Valley sends shock waves through the financial system, forcing the US government to bail out bank creditors – has never been more relevant. One of our core tasks is to identify ways of improving the architecture of the financial system. Then there are other developments which require a solid understanding of banking and financial markets as a basis for policy-making advice – like the Corona pandemic, for instance, the war in Ukraine and its reconstruction in the aftermath, the implications of rising interest rates and quantitative tightening for financial stability, and, last not least, the concurrent green transition of the economy and the challenges from crypto markets. So over the last decade, the themes of relevance to SAFE's work have continued to rise.

**Looking back, what were the milestones in your role as founding director?**

**JAN PIETER KRAHNEN:** Over the past 25 years, bringing finance and banking to the forefront of research-backed policymaking have been the principle focus of my work – and of my aspirations. Our academic home, Goethe University, allowed us to build a network within the financial industry and, later, with policy institutions; the result was the birth of the Center for Financial Studies CFS in the late

1990s. The State of Hessen joined in the effort and funded the House of Finance in 2008 as a home for CFS and several smaller finance-related research initiatives. With this cluster of people and institutions at Goethe University available and the devastating impact of the global financial crisis being keenly felt, Hessen granted us status as a temporary research center in 2013 under the name SAFE, sustainable architecture for finance in Europe. Over the seven years as part of LOEWE, SAFE received an increasing amount of attention from policymakers in Berlin and Brussels, paving the way for our transition in 2020 to a permanently funded Leibniz institution. Essentially, this represented public acknowledgement of our long-held two-pillar approach at SAFE: policy advice based on solid empirical research.

### What do you wish SAFE for the future?

**JAN PIETER KRAHNEN:** That is simple: I want SAFE to become a strong, recognizable voice in the chorus of research-based think tanks. I hope it never stops redefining and adapting its key policy propositions in the interests of freedom and prosperity, both in Europe and around the globe. And so I hope that everyone here maintains the momentum we have built up – and builds on it, further consolidating and expanding our position as an institute with strong research and policy-advice capabilities. In my successor Florian Heider, I see an excellent addition to the team who will help us do just that.

### Which brings us to you, Mr. Heider. With you as Scientific Director, how does the SAFE journey continue?

**FLORIAN HEIDER:** First of all, I have to say that Jan and the team could not have set the institute up better! The pioneering work which has been done here forms a long-lasting foundation on which we can continue to build. And that is what we are now in the process of doing. For the Department Director position in Macro-Finance, we had outstanding applications in the 2022 calls and will be able to complete the process within the set timeframe. In addition, we have created a tenure-track professorship in Behavioral Finance, for which excellent candidates have applied, too. We can be proud of the fact that we continue to attract such high-quality applications – also for our postdoctoral fellowships, which represent a path for skilled researchers to find their way to us, sharing their knowledge and experience here, and at the same time benefitting from the environment at SAFE. It's a classic win-win situation.

### What challenges do you see for SAFE?

**FLORIAN HEIDER:** For us at SAFE, the challenge will always be ensuring a sound and sustainable financial system. Some aspects of this challenge are well-known,

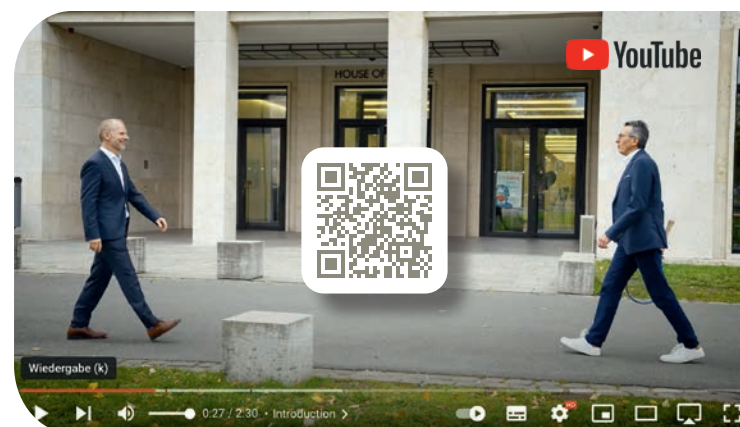
and we have significant competencies in these areas – regulation of financial markets and the banking system, for example, with a strong focus on legal issues. Other aspects are new, and so we have to develop new competencies to respond. Here, I would like to mention the interaction between the financial sector and the economy as a whole (referred to as 'macro-finance') and, of course, financing of the transition to a green economy.

Compared to other institutes, SAFE has a clearly-defined focus on finance. This niche, however, is highly relevant given that financial markets are economies' nervous systems. From a researcher's perspective, our role is to understand and explain these markets based on hard evidence. For example, we can break down the process of how systemic risk arises and then propose action for avoiding financial crises in the future; we can explain how regulation interacts with insurance and moral hazard. Then there is the fact that climate change is the defining issue of our age, but that it is not yet clear how the transformation to a more sustainable economy can and should be funded. In spite of this, we must not forget that the issue of pension provision is a time bomb that is ticking ever faster.

To address these issues, we need better financial education so that private households can make informed decisions. And in all of this, one thing is clear: the market is our friend, not our foe. If we can get this message across, SAFE will make a valuable contribution to improve understanding of financial markets.

### So that is the future direction for SAFE?

**FLORIAN HEIDER:** Yes, but we do not want to be just one of many possible places offering answers to these questions: the goal is to be the first place in Europe people head to get an understanding of the topics SAFE has been researching since it was founded. To get there, we must continue on our journey, developing to respond to the changing needs of society and the economy.



A video on the change of academic leadership at SAFE is available at



<https://youtu.be/g4t23YocXE>



### **OLIVER HINZ COORDINATES SAFE'S NEW DIGITAL FINANCE NETWORK**

Oliver Hinz is coordinating the new Digital Finance Network at SAFE, which was established on 1 September 2022. The network aims to connect researchers in the fields of digital transformation and finance by addressing the resilience of financial systems, finance and artificial intelligence, and decentralized finance. Part of the concept of the network is to hold a SAFE Digital Finance Seminar at regular intervals hosting speakers in the research area from Germany and abroad.

A SAFE Fellow since the beginning of 2020, Oliver Hinz has been coordinating the Digital Finance Network and is now also taking on a SAFE Bridge Professorship, which aims to link researchers at the Leibniz Institute with the Department of Economics at Goethe University Frankfurt, where Hinz has been Chair of Information Systems and Information Management since September 2017.

Hinz' research interests include digital markets, e-finance, and predictive analytics and applied machine learning; he has completed various research visits at institutions such as the University of Southern California, the University of Maryland, the Massachusetts Institute of Technology, Microsoft Research New York, and HEC Paris. His work has been published in renowned journals such as *Information Systems Research* (ISR), *Management Information Systems Quarterly* (MISQ), *Journal of Marketing*, *Journal of Management Information Systems* (JMIS), *Decision Support Systems* (DSS), *Electronic Markets* (EM), and *Business & Information Systems Engineering* (BISE).



Profile at SAFE:

<https://safe-frankfurt.de/oliver-hinz>



### **ANDREAS HACKETHAL COORDINATES PENSION FINANCE LAB AT SAFE**

In 2022, SAFE and Goethe University Frankfurt joined forces to create and test a prototype data trustee platform which features a mobile application for individual pension planning.

Funded by Germany's Federal Ministry for Economic Affairs and Climate Action, this platform will enable households to upload all data regarding their financial holdings and pension claims. Thanks to the embedded analytical tools, users can understand their current pension situation and how to improve it. Furthermore, they are encouraged to donate their pseudonymized data to research via the platform.

Combining this data with in-app surveys, SAFE researchers can carry out sophisticated field experiments in the area of pension finance, and retirement planning in particular. The SAFE Pension Finance Lab has been established to provide the technical and organizational infrastructure for SAFE researchers to access the pseudonymized data and to conduct experiments.

The Lab is coordinated by Andreas Hackethal who holds a professorship for personal finance at Goethe University. His empirical research is on individual financial behavior, financial advice, and pension finance. His work has been published in the *Journal of Finance*, the *Review of Financial Studies*, and the *Review of Finance*. He also chairs the advisory board of the German Federal Financial Supervisory Authority BaFin.



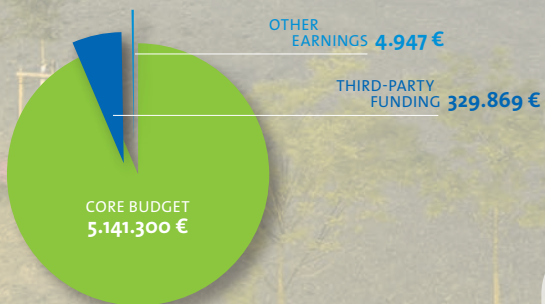
Profile at SAFE:

<https://safe-frankfurt.de/andreas-hackethal>

In the following section, we provide an overview of the institute's personnel and financial resources as of the reporting date of 31 December 2022.

### SAFE TOTAL INCOME

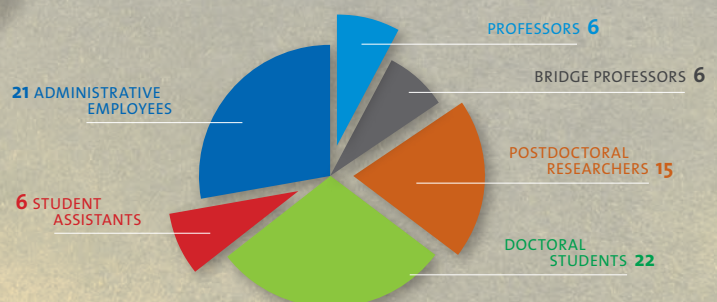
Total income in 2022: 5.476.116 €



Items stated in million € have been rounded to the nearest million.

### SAFE STAFF STATISTICS

Total 76 Employees as of 31.12.2022





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 All SAFE publications:

<https://safe-frankfurt.de/publications/published-papers>





## WORKING PAPERS 2022

Abiry, R., Ferdinandusse, M., Ludwig, A. and Nerlich, C.

**“Climate Change Mitigation: How Effective is Green Quantitative Easing?”**,  
SAFE Working Paper No. 376.

Hurwitz, A., Mitchell, O. S. and Sade, O.  
**“Testing Methods to Enhance Longevity Awareness”**,  
SAFE Working Paper No. 375.

Fiordelisi, F., Fusi, G., Maddaloni, A. and Marqués-Ibáñez, D.  
**“Pandemic Lending: Micro and Macro Effects of Model-Based Regulation”**,  
SAFE Working Paper No. 374.

Hackethal, A., Hanspal, T. and Kormanyos, E.  
**“Do Gamblers Invest in Lottery Stocks?”**,  
SAFE Working Paper No. 373.

Pollastri, A., Rodrigues, P., Schlag, C. and Seeger, N.  
**“A Jumping Index of Jumping Stocks? An MCMC Analysis of Continuous-Time Models for Individual Stocks”**,  
SAFE Working Paper No. 372.

Croce, M. M., Marchuk, T. and Schlag, C.  
**“The Leading Premium”**,  
SAFE Working Paper No. 371.

Abdel-Karim, B. M., Bauer, K., Hinz, O. and Nofer, M.  
**“The Effects of Discontinuing Machine Learning Decision Support”**,  
SAFE Working Paper No. 370.

Langenbucher, K.  
**“Consumer Credit in The Age of AI – Beyond Anti-Discrimination Law”**,  
SAFE Working Paper No. 369.

Horneff, V., Maurer, R. and Mitchell, O. S.  
**“How Would 401(k) ‘Rothification’ Alter Saving, Retirement Security, and Inequality?”**,  
SAFE Working Paper No. 368.

Bender, M., Clapham, B., Gomber, P. and Lausen, J.  
**“Drivers and Effects of Stock Market Fragmentation - Insights on SME Stocks”**,  
SAFE Working Paper No. 367.

Sagade, S., Scharnowski, S. and Westheide, C.  
**“Broker Colocation and the Execution Costs of Customer and Proprietary Orders”**,  
SAFE Working Paper No. 366.

Fohlin, C., Lu, Z. and Zhou, N.  
**“Short Sale Bans May Improve Market Quality During Crises: New Evidence from the 2020 Covid Crash”**,  
SAFE Working Paper No. 365.

Nam, R.  
**“Open Banking and Customer Data Sharing: Implications for FinTech Borrowers”**,  
SAFE Working Paper No. 364.

Bauer, K., Hinz, O., Jagow, J., Mihale-Wilson, C., Speicher, M. and Zahn, M. v.  
**“The Smart Green Nudge: Reducing Product Returns through Enriched Digital Footprints & Causal Machine Learning”**,  
SAFE Working Paper No. 363.

Bucher-Koenen, T., Hackethal, A., Kasinger, J. and Laudenbach, C.  
**“Disparities in Financial Literacy, Pension Planning, and Saving Behavior”**,  
SAFE Working Paper No. 362.

Bertay, A. C., Carreño Bustos, J. G., Huizinga, H., Uras, B. and Vellekoop, N.  
**“Technological Change and the Finance Wage Premium”**,  
SAFE Working Paper No. 361.

Weichenrieder, A. J.  
**“A Note on the Role of Monetary Policy When Natural Gas Supply Is Inelastic”**,  
SAFE Working Paper No. 360.

Yongwook Kwon, S., Ma, Y. and Zimmermann, N. K.  
**“100 Years of Rising Corporate Concentration”**,  
SAFE Working Paper No. 359.

Bagnara, M. and Jappelli, R.  
**“Liquidity Derivatives”**,  
SAFE Working Paper No. 358.

Truong, H. S. and Walz, U.  
**“Spillovers of PE Investments”**,  
SAFE Working Paper No. 357.

Eyting, M.  
**“Why do we Discriminate? The Role of Motivated Reasoning”**,  
SAFE Working Paper No. 356.

Jank, S., Moench, E. and Schneider, M.  
**“Safe Asset Shortage and Collateral Reuse”**,  
SAFE Working Paper No. 355.

Steuer, S.  
**“Common Ownership and the (Non-) Transparency of Institutional Shareholdings: An EU-US Comparison”**,  
SAFE Working Paper No. 354.

Balakina, O., Bäckman, C., Hackethal, A., Hanspal, T. and Lammer, D.  
**“Good Peers, Good Apples? Peer Effects in Portfolio Quality”**,  
SAFE Working Paper No. 353.

Billio, M., Costola, M., Pelizzon, L. and Riedel, M.  
**“Creditworthiness and buildings’ energy efficiency in the Italian mortgage market”**,  
SAFE Working Paper No. 352.

Dertwinkel-Kalt, M., Kasinger, J. and Schneider, D.  
**“Skewness Preferences: Evidence from Online Poker”**,  
SAFE Working Paper No. 351.

Jappelli, R., Lucke, K. and Pelizzon, L.  
**“Price and Liquidity Discovery in European Sovereign Bonds and Futures”**,  
SAFE Working Paper No. 350.

Billio, M., Costola, M., Hristova, I., Latino, C. and Pelizzon, L.  
**“Sustainable Finance: A journey toward ESG and climate risk”**,  
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Nemeczek, F. and Radermacher, J. W.  
**“Personality-Augmented MPC: Linking Survey and Transaction Data to Explain MPC Heterogeneity by Big Five Personality Traits”**,  
SAFE Working Paper No. 348.

Gill, A., Hett, F. and Tischer, J.  
**“Time Inconsistency and Overdraft Use: Evidence from Transaction Data and Behavioral Measurement Experiments”**,  
SAFE Working Paper No. 347.

Inderst, R. and Opp, M.  
**“Socially Optimal Sustainability Standards with Non-Consequentialist (“Warm Glow”) Investors”**,  
SAFE Working Paper No. 346.



Heider, F. and Inderst, R.  
**“A Corporate Finance Perspective on Environmental Policy”**,  
 SAFE Working Paper No. 345.

Eibelshäuser, S. and Smetak, F.  
**“Frequent Batch Auctions and Informed Trading”**,  
 SAFE Working Paper No. 344.

Di Nola, A., Kaas, L. and Wang, H.  
**“Rescue Policies for Small Businesses in the COVID-19 Recession”**,  
 SAFE Working Paper No. 343.

Gözlüçöl, A. A. and Ringe, W.-G.  
**“Private Companies: The Missing Link on The Path to Net Zero”**,  
 SAFE Working Paper No. 342.

Eckert, S.  
**“The Limits of Joint-Institutional Frameworks for Sectoral Governance in EU-Swiss Bilateral Relations: Lessons for Future Relations with the UK”**,  
 SAFE Working Paper No. 341.

Kotovskaia, A. and Tröger, T.  
**“National Interests and Supranational Resolution in the European Banking Union”**,  
 SAFE Working Paper No. 340.

Eckert, S., Lindner, V. R. and Nölke, A.  
**“Political Science Research on the Reasons for the (non) Adoption and (non) Implementation of EMU Reform Proposals: The State of the Art”**,  
 SAFE Working Paper No. 339.

Massoc, E.  
**“Fifty Shades of Hatred and Discontent - Varieties of Anti-finance Discourses on the European Twitter (France, Germany, Italy, Spain and the UK)”**,  
 SAFE Working Paper No. 338.

Lubda, M. and Massoc, E.  
**“Social Media, Polarization and Democracy: A Multi-Methods Analysis of Polarized Users’ Interactions on Reddit’s r/WallStreetBets”**,  
 SAFE Working Paper No. 337.

Klockmann, V., Villeval, M. C. and Schenk, A. v.  
**“Artificial Intelligence, Ethics, and Pivotality”**,  
 SAFE Working Paper No. 336.

Klockmann, V., Villeval, M. C. and Schenk, A. v.  
**“Artificial Intelligence, Ethics, and Intergenerational Responsibility”**,  
 SAFE Working Paper No. 335.

Dergunov, I., Meinerding, C. and Schlag, C.  
**“Extreme Inflation and Time-Varying Expected Consumption Growth”**,  
 SAFE Working Paper No. 334.

Lindner, V. R.  
**“Solidarity without Conditionality. Comparing the EU Covid-19 Safety Nets SURE, Pandemic Crisis Support, and European Guarantee Fund”**,  
 SAFE Working Paper No. 333.

Beck, T., Krahnen, J. P., Martin, P., Mayer, F., Pisani-Ferry, J., Tröger, T., Véron, N., Weder di Mauro, B. and Zettelmeyer, J.  
**“Completing the banking union: Economic requirements and legal conditions”**,  
 SAFE White Paper No. 93.

Farina, T., Krahnen, J. P., Mecatti, I., Pelizzon, L., Schlegel, J. and Tröger, T.  
**“Is there a ‘retail challenge’ to banks’ resolvability? What do we know about the holders of bail-inable securities in the Banking Union?”**,  
 SAFE White Paper No. 92.

Bischof, J., Haselmann, R. and Tröger, T.  
**“Monitoring Complex Financial Instruments in Banks’ Balance Sheets”**,  
 SAFE White Paper No. 91.

Maurer, R. and Schwintowski, H.-P.  
**“Die Generationenrente ab Geburt: Vorschlag für eine Altersarmut vermeidende ergänzende kapitalgedeckte Alterssicherung”**,  
 SAFE White Paper No. 90.

Nölke, A.  
**“The weaponization of global payment infrastructures: A strategic dilemma”**,  
 SAFE White Paper No. 89.

Haselmann, R., Krahnen, J. P., Tröger, T. and Wahrenburg, M.  
**“Institutional Protection Schemes: What are their differences, strengths, weaknesses, and track records?”**,  
 SAFE White Paper No. 88.

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#### POLICY PUBLICATIONS 2022

Kotovskaia, A. and Meier, N.  
**“BigTech Cryptocurrencies – European regulatory solutions in sight”**,  
 SAFE Policy Letter No. 97.

Weichenrieder, A. J.  
**“Russia Today – The Russian Invasion of Ukraine and Russia’s Public Finances”**,  
 SAFE Policy Letter No. 96.

Angeloni, I., Daase, C., Deitelhoff, N., Goldmann, M., Krahnen, J. P., Kroll, S., Luft, C.-G., Nölke, A., Peez, A. and Pelizzon, L.  
**“Designing a rational sanctioning strategy”**,  
 SAFE Policy Letter No. 95.

Inderst, R. and Thomas, S.  
**“Nachhaltigkeit und Wettbewerb: Zu einer Reform des Wettbewerbsrechts für die Erreichung von Nachhaltigkeitszielen”**,  
 SAFE Policy Letter No. 94.

 All SAFE Policy Publications:

<https://safe-frankfurt.de/policy-center/policy-publications>





## SAFE's events and visitor statistics in 2022 at a glance

All upcoming events at SAFE



<https://safe-frankfurt.de/news-latest/events>



In 2022, SAFE held a total of 32 events, including 12 policy forums, with more than 2000 participants and 461 presenters, 139 of whom were female.

Most of the events – such as lectures, conferences, panel discussions, seminars, and workshops – were held in person or hybrid formats, with nine events were held wholly online.

### DATA CENTER WORKSHOPS

2022	TITLE
18 May	<b>SAFE Data Web Seminars</b> Pandas in Python for Economics Finance and Taking advantage of the SAFE Research Infrastructure
13 Oct	<b>Introduction to Bloomberg</b> Using the Terminal and Introduction to Bloomberg Using BQL in Excel
18 Oct	<b>Leveraging the Bloomberg Terminal for ESG Analysis</b>

### POLICY EVENTS

2022	TITLE
27 Jan	<b>Policy Lecture: Debt Sustainability – A Global Perspective (web seminar)</b> joint with the Center for Financial Studies (CFS), <i>Speakers: Ludger Schuknecht (Asian Infrastructure Investment Bank), Otmar Issing (CFS)</i>
17 Feb	<b>Web Seminar on Geneva Report “Debt: The Eye of the Storm”</b> joint with Center for Economic Policy Research (CEPR) and the Institute for Banking and Financial History (IBF), <i>Speaker: Moritz Schularick (Bonn)</i>
25 May	<b>Policy Lecture “Normalization of Monetary Policy”</b> joint with CEPR, <i>Speaker: Fabio Panetta (European Central Bank)</i>
2 June	<b>Policy Lecture “FinTech and CBDC”</b> <i>Speakers: Corinne Zellweger-Gutknecht (Basel), Marco Dell’Erba (Zurich), Alexander Merkel (Deutsche Bundesbank)</i>
14 June	<b>Presentation and Discussion of the May 2022 ECB Financial Stability Review (web seminar)</b> joint with CEPR <i>Speaker: John Fell (ECB)</i>
27 June	<b>LawLab Workshop on the paper “Predictably Unequal. The Effects of Machine Learning on Credit Markets” (web seminar)</b> <i>Speakers: Ansgar Walther (London), Talia Gillis (Columbia), Aislinn Kelly-Lyth (Oxford)</i>
12 Jul	<b>1st Sustainability Standards Watchers Conference</b> joint with Senckenberg Biodiversity & Climate Research Center, Potsdam Institute for Climate Impact Research, and Goethe University Frankfurt <i>Speakers: Sue Lloyd (International Sustainability Standards Board), Katrin Böhning-Gaese (Senckenberg), Sabine Mauderer (Deutsche Bundesbank), Lucrezia Reichlin (London), Robert F. Stambaugh (Wharton)</i>
6 Oct	<b>ECB/ESRB Report on the Macropprudential Challenge of Climate Change (web semina)</b> joint with CEPR <i>Speakers: Paul Hiebert, Stephan Fahr, Katarzyna Budnik, Michael Grill (all ECB)</i>
11 Nov	<b>LawLab Event – The Middlemen Economy</b> <i>Speakers: Kathryn Judge (Columbia), Hans Christoph Grigoleit (Munich), Marc-Philippe Weller (Heidelberg), Bernd Skiera (Frankfurt)</i>
21 Nov	<b>Presentation of the November 2022 ECB Financial Stability Review (web seminar)</b> joint with CEPR <i>Speakers: Tamarah Shakir, Daniel Dieckelmann, Manuela Storz (all ECB)</i>
29 Nov	<b>Pre-UN Biodiversity Conference “Business needs Nature: Towards a Nature-Positive Economy”</b> joint with Senckenberg Society for Nature Research, Natural History Museum Berlin, Leibniz Institute for the Analysis of Biodiversity Change, ESMT Berlin, Future Institute for Sustainable Transformation, Campaign for Nature, and Frankfurt Zoological Society
30 Nov	<b>Policy Discussion “Leveraged – financial stability in a high debt world”</b> joint with IBF, CFS, and the House of Finance <i>Speakers: Moritz Schularick (Bonn), Daniel Dieckelmann (ECB), Kaspar Zimmermann (SAFE)</i>

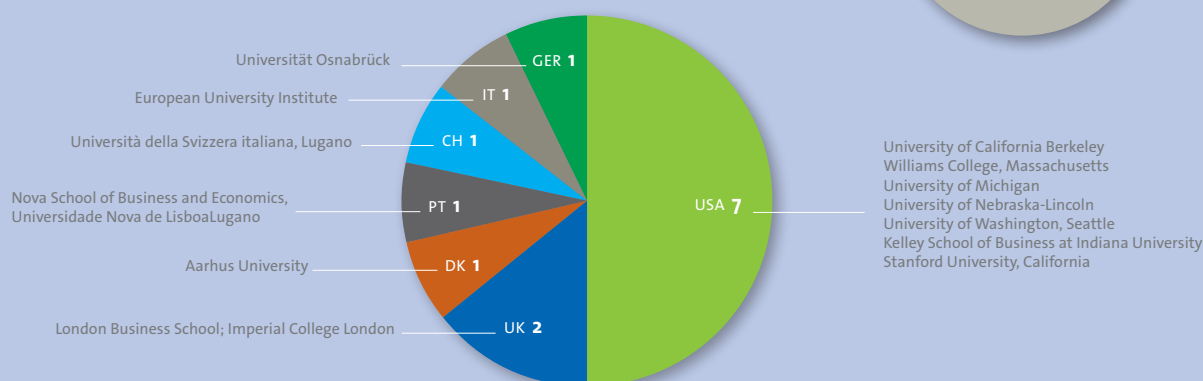
## RESEARCH CONFERENCES &amp; WORKSHOPS

2022	TITLE
7-8 April	<b>8th International Conference on Sovereign Bond Markets</b> joint with New York University, Imperial College London, London Business School, Bank of Canada, Deutsche Bundesbank, and the European Central Bank, <i>Speakers: Charles Goodhart (London School of Economics), Huw Pill (Chief Economist, MPC, Bank of England), Marti Subrahmanyam (NYU Stern School of Business)</i>
2 May	Research Conference “ <b>Financial Regulation – Going Green</b> ” joint with the Center for Advanced Studies on the Foundations of Law and Finance, Frankfurt School of Finance & Management, Goethe University Frankfurt, Halle Institute for Economic Research, and Humboldt University Berlin
31 May	<b>12th Labex ReFi-NYU-SAFE/LawFin Law &amp; Banking/ Finance Conference (online)</b> joint with the Financial Regulation Lab, New York University, and the Center for Advanced Studies on the Foundations of Law and Finance
3-4 June	<b>2022 Global Corporate Governance Colloquium (GCGC)</b> joint with Columbia University, Harvard University, Imperial College London, National University of Singapore, Peking University, Seoul National University, Stanford University, Swedish House of Finance, University of Oxford, University of Tokyo, Yale University, DFG LawFin Center, and Goethe University Frankfurt
23-24 June	<b>Behavioral Measurement Conference</b> joint with the Frankfurt Laboratory for Experimental Economic Research (FLEX)
29-30 June	<b>Workshop for Early Career Scholars on “International Banking and Finance in Troubled Times: Reflections from the Past”</b> joint with Goethe University Frankfurt and IBF, <i>Speaker: Catherine R. Schenk (Oxford)</i>

2022	TITLE
29 June	<b>Financial History Lecture with Catherine R. Schenk (Oxford University)</b> joint with Goethe University's House of Finance and IBF
31 May	<b>12th Labex ReFi-NYU-SAFE/LawFin Law &amp; Banking/ Finance Conference (online)</b> joint with the Financial Regulation Lab, New York University, and the Center for Advanced Studies on the Foundations of Law and Finance
7-8 July	<b>6th Household Finance Workshop</b> <i>Speaker: Laurent E. Calvet (EDHEC Business School)</i>
21 July	<b>2nd Women in Law and Finance Workshop</b> joint with the Center for Advanced Studies on the Foundations of Law and Finance, <i>Speaker: Lena Jany (Bonn)</i>
21 Aug	<b>Tri-City Day-Ahead Workshop on the Future of Financial Intermediation</b> joint with Frankfurt School of Finance & Management, Bayes Business School, University of Zurich, and in coordination with the Conference on Regulating Financial Markets (Deutsche Bundesbank)
29-31 Aug	<b>2022 CEBRA Annual Meeting</b> joint with Bank of Spain, Barcelona School of Economics, and the Department of Economics and Business of the Universitat Pompeu Fabra, <i>Speakers: Margarita Delgado (Banco de España), John Hassler (Stockholm), Philip Lane (ECB), Harrison Hong (Columbia) and Sarah Breeden (Bank of England)</i>
19 Sep	<b>Research Workshop on Heterogeneity in Investor Preferences for Sustainable/Green Finance</b>
27 Sep	<b>9th SAFE Asset Pricing Workshop</b>
28 Sep	<b>6th SAFE Market Microstructure Conference</b>

## VISITORS AT SAFE IN 2022

VISITORS: 14





## SAFE MEMBERS

NAME	POSITION
Prof. Dr. Christina Bannier	Professor of Banking & Finance at Justus-Liebig-University Gießen
Prof. Dr. Günter Beck	Professor at the University of Siegen, Chair for European Macroeconomics
Prof. Dr. Volker Brühl	Managing Director of the Center for Financial Studies
Dr. Muriel Büsser	Administrative Director at SAFE
Prof. Dr. Albrecht Cordes	Professor of Medieval and Modern Legal History and of Civil Law at Goethe University Frankfurt
Lut de Moor	Head of Research Funding at SAFE
Prof. Dr. Lutz Johanning	Professor at the Otto Beisheim School of Management, Chair of Empirical Capital Market Research
Prof. Dr. Kristian Kersting	Professor at the Computer Science Department and Head of the Artificial Intelligence and Machine Learning (AIML) Lab at TU Darmstadt University
Prof. Dr. Rainer Klump	Professor of Economics and Executive Director of the House of Finance at Goethe University Frankfurt
Prof. Dr. Wolfgang König	Professor emeritus at Goethe University Frankfurt
Prof. Dr. Jan Pieter Krahn	Founding Director emeritus of SAFE and Professor emeritus of Finance at Goethe University Frankfurt
Prof. Dr. Raimond Maurer	Professor of Investment, Portfolio Management and Pension Finance at Goethe University Frankfurt
Prof. Dr. Emanuel Mönch	Professor of Financial and Monetary Economics at Frankfurt School of Finance & Management
Prof. Dr. Dr. Alexander Morell	Professor of Business Law and Economics at Goethe University Frankfurt and SAFE Bridge Professor
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Bettina Stark-Watzinger	German Federal Minister for Education and Research
Prof. Dr. Erik Theissen	Professor of Finance at University of Mannheim
Prof. Dr. Uwe Walz	Professor of Economics at Goethe University Frankfurt, Chair of Industrial Organization, and Deputy Scientific Director at SAFE

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Daniela Weber-Rey	Lawyer, Supervisory Board Member

## SAFE RESEARCH ADVISORY COUNCIL

The Research Advisory Council advises the Management Board and the Scientific Board on the development of the research program and evaluates all academic activities of SAFE at regular intervals.

NAME	POSITION
Prof. Dr. Arnoud Boot	Professor of Corporate Finance and Financial Markets at the University of Amsterdam and Chairperson of the SAFE Research Advisory Council
Prof. Elena Carletti, Ph.D.	Professor of Finance at Bocconi University
Prof. Luc Laeven, Ph.D.	Professor of Finance at Tilburg University and Director-General of the Research Department of the European Central Bank
Prof. Ulrike Malmendier, Ph.D.	Professor of Finance at the University of California, Berkeley
Prof. Steven Ongena, Ph.D.	Professor of Banking at the University of Zurich
Prof. Anna Pavlova, Ph.D.	Professor of Finance at London Business School
Prof. Dr. Katharina Pistor	Edwin B. Parker Professor of Comparative Law at Columbia Law School and Vice Chairperson of the SAFE Research Advisory Council
Prof. Dr. Moritz Schularick	Professor of Economics at Sciences Po Paris and the University of Bonn (expected to take over as President of the Kiel Institute for the World Economy on 1st June 2023)
Frank Smets, Ph.D.	Adviser in the Counsel to the Executive Board at the European Central Bank
Prof. Ingrid M. Werner, Ph.D.	Martin and Andrew Murrer Professor in Finance at Ohio State's Fisher College of Business
Prof. Dr. Cornelia Woll	President of the Hertie School Berlin and Professor of International Political Economy

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The SAFE Policy Advisory Council advises the Policy Center in its efforts to build and expand a network of policy-makers and political institutions inside and outside Europe. By identifying relevant topics and offering critical appraisals of projects and their implementation, it helps to shape the agenda of the Policy Center.

NAME	POSITION
John C. Berrigan	Directorate-General for Financial Stability, Financial Services and Capital Markets Union at the European Commission and Vice Chairperson of the SAFE Policy Advisory Council
Lorenzo Bini Smaghi, Ph.D.	Chairman of the Board of Directors at Société Générale
Michael Boddenberg	State Minister of Finance in Hesse, Germany
Sven Giegold	State Secretary at the Federal Ministry for Economic Affairs and Climate Action
Kerstin af Jochnik	Member of the Supervisory Board of the Single Supervisory Mechanism
Dr. Jörg Kukies	State Secretary at the German Chancellery
Emmanuel Moulin	Director General of the French Treasury
Fabio Panetta, Ph.D.	Member of the European Central Bank's Executive Board and Chairperson of the SAFE Policy Advisory Council
Tuomas Saareheimo, Ph.D.	Chairman of the Economic and Financial Committee of the European Union
Bettina Stark-Watzinger	German Federal Minister for Education and Research
Prof. Dr. Joachim Wuermeling	Member of the Executive Board of the Deutsche Bundesbank (until 31st December 2023)

## ABOUT SAFE

The Leibniz Institute for Financial Research SAFE (Sustainable Architecture for Finance in Europe) is dedicated to interdisciplinary research on financial markets and their participants in Europe; it also provides independent, research-based policy advice. The institute focuses on research cooperation across the fields of finance, economics, law, and political science.

Professional policy advice is SAFE's second pillar. Based on independent academic research, the SAFE Policy Center maintains ongoing dialogue with governments and elected representatives about topical questions on financial markets. Its aim is to develop answers to questions on how to move towards a better regulatory framework. SAFE was founded in 2013 as a cooperation between Goethe University Frankfurt and the Center for Financial Studies (CFS). Since January 2020, SAFE has been working as an independent institute and is a member of the Leibniz Association. The organization aims to make a contribution to the creation and strengthening of a sustainable, crisis-proof financial system which promotes innovation and serves the individual needs of business and citizens.

SAFE maintains strong and close ties with other research facilities and institutions internationally. The institute's research focuses on five thematic areas: Financial Intermediation, Law and Finance, Financial Markets, Household Finance, and Macro Finance. SAFE strives for research excellence, combined with its goal of translating academic results into policy, administrative practice, and wider societal outcomes, both at German and European levels. In addition, SAFE works on developing and providing infrastructure in the field of European economic and financial data with a view to enabling better empirical analyses.



Leibniz Institute for Financial Research SAFE  
Sustainable Architecture for Finance in Europe  
House of Finance  
Theodor-W.-Adorno-Platz 3  
60323 Frankfurt am Main · Germany  
[info@safe-frankfurt.de](mailto:info@safe-frankfurt.de)



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