Bank resolution –

The cost of time pressure

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Leibniz Institute for
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Dear readers,

My first year at SAFE had yet to get fully underway when, in the spring of 2023, I suddenly realized how sought-after and relevant our discipline of financial research can be, despite its occasionally niche reputation. While the collapse of Silicon Valley Bank was far from an aberrational event, its reverberations in the US and Europe spooked investors, resurrecting vivid memories of 2007–08. Since those years, Europe has established a much more effective system of banking regulation, which allowed a full-blown crisis to be averted in the spring of 2023. Yet we still witnessed a frenzy of ad hoc interventions organized during rushed weekend meetings.

As the events of spring 2023 show, hastily organized buyouts of failing institutions can create additional costs for taxpayers. In this third issue of our Points magazine, we explain why this is the case and highlight evidence-based solutions for avoiding unnecessarily expensive rescue measures.

To be sure, policy assessments and recommendations are only as good as the research on which they are based. This insight informs SAFE’s dedication to methodically rigorous research – which, as showcased here, is concerned with a wide array of topics, including popular misconceptions of meritocracy, optimal policies for dollar pricing, information presentation as a portfolio allocation factor, and principles for resolving restitution claims that fall outside EU consumer law.

In our interview with SAFE Senior Fellow Elke König, we discuss the projects to create a European banking and capital markets union – and why these projects are still unfinished. And in the policy section of this issue, a team of SAFE economists and lawyers analyze the implementation of European sustainability and taxonomy-based disclosure regulations.

All in all, a highly diverse range of topics – and yet in each case, there is clear relevance to pressing questions of the day. Given this applicability to real-world concerns, I am reminded that our work at SAFE is far from a “niche endeavor.”
While there were marked differences between the banking turmoil of spring 2023 and the 2008 financial crisis, one similarity stands out: crucial negotiations between resolution authorities, governments, and central banks were handled chaotically over the weekend, and were concluded before the markets reopened. After more than a decade of improvements in banking regulation and the introduction of comprehensive resolution planning, there is still a need to protect uninsured depositors and reduce the outsized profits acquirers can make during the resolution process.
When regulators shut down Silicon Valley Bank (SVB) on 10 March 2023 and named the US Federal Deposit Insurance Corporation (FDIC) as the receiver, the crisis was much more than an idiosyncratic run on SVB’s deposits, as additional banks soon failed: namely, Signature Bank and First Republic in the US, and Credit Suisse in Europe. In response to these failures, the US Congress invoked the “systemic risk exception,” allowing the FDIC to ensure the safety of uninsured deposits at the failed banks. Furthermore, as a proactive measure against contagion effects, the Federal Reserve initiated the Bank Term Funding Program (BTFP) to provide liquidity at face value to US depository institutions for up to one year. Accepting collateral at face value rather than at fair market value was a novelty for the Fed. In addition, to reassure international markets, several major central banks announced US dollar swap arrangements to respond to US dollar liquidity shortages.

The withdrawal of bank deposits may create liquidity problems that force an institution into fire sales and, if distrust persists, lead to liquidation or bankruptcy. Bank runs are panic-driven outflows of bank deposits and are typically self-reinforcing, which explains the prompt and forceful reaction in the US.

At the heart of every bank run, and the reason why bank runs are rarely confined to a single bank, is the risk that depositors will lose their money. This risk is particularly acute when depositors are uninsured. By protecting all deposits, including previously uninsured ones, the risk of bank runs can be effectively averted. Recall that although three large US banks had to be wound down during the turmoil of March 2023, no depositor was harmed because the FDIC was able to offer expanded coverage of deposits. Adequately designed and priced deposit insurance can establish clear ex ante guidelines, eliminating the need to rely

**THE PROTECTION OF UNINSURED BANK DEPOSITS HELPS PREVENT BANK RUNS**

As detailed in a SAFE Policy Letter, SVB-style bank runs can be avoided given the adoption of a deposit insurance system that draws a clear line between loss-absorbing capital and demand deposits. While loss-absorbing capital – that is, equity capital plus bail-in-able debt – is an important source of market discipline, uninsured short-term deposits are a primary cause of bank runs. The Policy Letter thus argues for the inclusion of such deposits in a more comprehensive deposit insurance system. Specifically, deposit insurance should be expanded to cover retail and commercial demand deposits over 100,000 euros. This would close a gap in Europe’s current regulatory framework. Such a deposit insurance system would not come for free but would require the levying of insurance premiums that would be used to cover insured deposits in the event of a bank failure. Moreover, significantly expanded deposit insurance has to be complemented with more loss-absorbing capital and liabilities to preserve banks’ incentives for prudent behavior. As an expanded deposit insurance system would eliminate the cause of bank runs, there would rarely be a need for outgoing payments. This would reduce the likelihood of taxpayer money being required to prop up ailing banks.

The SAFE Policy Letter No. 98 is available here: [https://safe-frankfurt.de/policy-letter-98](https://safe-frankfurt.de/policy-letter-98)
A SAFE White Paper examines windfall profits accruing at acquirers of failing banks and pursues a methodological rigorous approach by estimating market-based Cumulative Abnormal Returns (CAR). In contrast to the $44 billion in windfall profits reported in the financial press, the paper finds positive abnormal returns of about half that amount. This raises concerns about the misleading nature of using accounting figures to assess the economic value of acquiring a failed bank since unrealized losses are not fully reflected in accounting data. New York Community Bank’s acquisition of Signature Bank, First Citizens’ acquisition of SVB, and JPMorgan Chase’s acquisition of First Republic resulted in massive losses for bank shareholders, bondholders, and the FDIC.

The paper addresses potential shortcomings in the resolution process and offers comprehensive recommendations to mitigate windfall profits for acquiring banks. It emphasizes the importance of auctions with sufficient bidders, early and thorough auction preparation, and the need to pre-arrange for a sale of both significant and non-significant banks.

Another often-overlooked crisis management lesson emerges from the transactions that resolved the bank failures of spring 2023. All four banks were eventually acquired by competitors, and none of them went into liquidation. The three US institutions were sold in auctions, while Credit Suisse was sold in a government-brokered national deal.

In the EU, regulation requires banks to issue a separate asset class, known as the Minimum Requirements for Own Funds and Eligible Liabilities (MRELs). These liabilities serve as a loss absorbing buffer and recapitalization facility in the event of a resolution, mitigating the impact of a bank’s failure on deposits. Setting this buffer at an appropriate level alongside existing equity and securing its availability for early loss absorption can reduce the likelihood of bank deposits bearing losses. Issuing and trading this asset class in the market also instills market discipline, putting constraints on the bank’s risk taking and investment decisions. MREL bonds can therefore take over the disciplinary role of uninsured deposits.

on unpredictable ad hoc crisis measures such as the “systemic risk exception” or government bailouts that put taxpayer money at risk.

https://safe-frankfurt.de/white-paper-98

The SAFE White Paper No. 98 is available here.
As the figure below indicates, market participants considered the acquisition highly profitable for First Citizens Bank (FCB), with the seller leaving money on the table and the stakeholders (FDIC, taxpayers) ultimately picking up the tab. A similar pattern can be observed in the other US cases.

Time pressure has its price. Negotiated deals or auctions forced by authorities are fraught with information asymmetries for potential acquirers. This reduces the number of bidders and increases the risk premiums they demand. Both outcomes reduce the price for the bank in resolution and make the necessary takeover less efficient. By protecting demand deposits, bank runs can be prevented. If authorities do not have to fear further liquidity outflows in demand deposit runs, chaotic weekend negotiations will no longer be necessary. Would-be acquirers of banks in resolution will have the time they need to access relevant information about the bank in resolution, which should ultimately increase the price paid and reduce the costs for stakeholders such as resolution authorities and taxpayers.

The figure shows the stock price performance of First Citizens Bank (FCB), the acquirer of Silicon Valley Bank, two selected competing but unsuccessful bidders – PNC Bank (PNC) and Citizens Financial Group (CFG) – and the US benchmark KBW Nasdaq Bank Index (KBW). FCB’s share price nearly tripled, while its peers and the banking benchmark remained flat. Source: Yahoo, authors’ calculations.

**ABNORMAL RETURNS FOR FIRST CITIZENS BANK, THE ACQUIRER OF SILICON VALLEY BANK**

![Graph showing abnormal returns for First Citizens Bank, the acquirer of Silicon Valley Bank, compared to PNC and CFG, with FCB's share price nearly tripling while its peers remained flat. Source: Yahoo, authors' calculations.]

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In their paper “How to Alleviate Correlation Neglect in Investment Decisions,” which appeared in the journal Management Science, the authors show how different methods of presenting prospective investment returns affect portfolio allocation decisions. Specifically, when investors are shown a sample of possible returns rather than just return probabilities, they are more likely to take asset correlation into account and diversify effectively.

Through experimental studies, the researchers reveal that sampling returns rather than solely receiving probabilities of joint returns helps investors effectively incorporate correlation into their investment choices. When sampling from joint distributions, participants in the experiments adjust their allocation between assets according to changes in correlation while neglecting correlation when provided with descriptions of joint probabilities. This experimental finding holds true for participants with varying levels of investment experience.

Diversification, famously called the “only free lunch in investment,” reduces portfolio risk while optimizing return probabilities. However, depending on how asset return expectations are presented, investors may fail to take advantage of diversification potential. The presentation of example return scenarios, rather than mere probability statistics, appears to improve participant understanding of how assets are correlated, and thus enhances diversification decisions. However, this impact on diversification choice does not appear to be driven by a better understanding of portfolio-level risk.

By showing how improved presentation formats can enhance portfolio allocation decisions, the paper has practical implications for regulators, banks, and asset management firms. Specifically, it draws attention to the value of presentation formats and tools that furnish tangible return scenarios.

How information is presented is important for diversification decisions

The paper is available here:

https://doi.org/10.1287/mnsc.2022.4535

Her co-authors are Michael Ungeheuer, Associate Professor of Finance at Aalto University’s Department of Finance, and Martin Weber, Senior Professor at the Business School of the University of Mannheim.
In “Shallow Meritocracy,” a forthcoming paper in the Review of Economic Studies, Peter Andre critically examines perceptions of meritocracy, which holds that individuals should be rewarded based on merit rather than the circumstances of their birth. Based on experiments with more than 9,000 people, he finds that individuals often have a “shallow” conception of merit, for they are quick to assign blame for choices even when these choices are significantly driven by unequal circumstances.

In the experiments, participants were asked to judge how much workers should earn. Despite awareness that unequal circumstances discouraged some workers from working hard, the participants tended to reward effort equally.

Further analysis revealed that the participants were aware of how circumstances could influence decisions, but lacked certainty regarding specific counterfactuals. This led them to base their judgments solely on observed effort while disregarding underlying circumstances.

Interestingly, the participants held different views of fairness, with some advocating that individuals should be compensated for the effects of adverse circumstances. By contrast, others believed that individuals should be rewarded solely based on actual choices, regardless of circumstance. These differing views underscore the complexities of meritocratic fairness as a touchstone for social policy and practice.

By apportioning blame while failing to consider underlying hardship, shallow meritocracy can disadvantage individuals who face adverse circumstances, the study concludes. This finding has implications for policies that seek to address inequality, such as affirmative action.

Peter Andre is an Assistant Professor of Behavioral Finance at SAFE and Goethe University Frankfurt. https://safe-frankfurt.de/peter-andre
“Optimal Policy under Dollar Pricing,” a paper published in *American Economic Review*, explores the policy implications of the fact that the prices of most goods in international trade are set in US dollars. By influencing the value of the dollar, the US can affect global trade flows. This may limit the ability of other countries to stabilize their economies through exchange rate management.

Using an open-economy model, the authors show that the best way for non-US countries to stabilize their economies is not to peg their exchange rate to the US dollar. Rather, they should focus entirely on domestic price stabilization. The logic is simple: the value of a local currency can affect the volume of external trade only indirectly, e.g., by influencing the pricing decisions of individual exporters. But in this case, there is alignment between the incentives of exporters and policymakers, as both want to generate the greatest returns for the domestic economy. In this way, policymakers can improve the volume of external trade merely by focusing on domestic objectives.

Furthermore, the authors argue that other policy instruments, such as unilateral capital controls or foreign exchange interventions, are similarly ineffective and should not be used in this case. The US, by contrast, can manipulate the dollar exchange rate to take advantage of the dominant status enjoyed by its currency in international trade. In particular, this allows the US to extract additional rents in international goods and asset markets. It follows that there are incentives for other economies, including the euro area, to promote their currencies in global trade.

**The policy implications of dollar hegemony**

[The paper is available here:](https://ssrn.com/abstract=3404660)

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[https://sites.google.com/site/kegorov7](https://sites.google.com/site/kegorov7)

*His co-author Dmitry Mukhin* is an Assistant Professor of Economics at London School of Economics.
In his paper “Restitution Claims – EU Consumer Law Principles and the Mortgage Credit Directive as an Overarching Value Model,” which is forthcoming in an edited volume from Cambridge University Press, author Nikolai Badenhoop examines the complex landscape of restitution claims under EU consumer law principles, with a particular focus on void contracts, and with a special emphasis on foreign currency loans in Central and Eastern Europe. Despite the absence of explicit rules in EU consumer law regarding such claims, Badenhoop identifies guiding principles derived from general EU consumer law, highlighting unjust enrichment restitution as a cornerstone. An analysis of European Court of Justice (ECJ) case law and directives such as the Unfair Contract Terms Directive and the Mortgage Credit Directive identifies core principles such as private autonomy, consumer equality, fairness, and good faith that underpin restitution claims in void consumer contracts.

The paper examines the prevalence of foreign currency loans in the early 2000s, particularly in Poland, where loans denominated in or indexed to foreign currencies, especially the Swiss franc, were standard, and highlights the subsequent challenges posed by currency fluctuations. The depreciation of the local currency against foreign currencies, exacerbated by global economic events, led to significant hardship for borrowers that triggered a wave of litigation and recovery claims, which in turn posed systemic risks for banks.

The paper distills the fundamental principles governing redress claims, drawing on general EU consumer law and directives, notably the Unfair Contract Terms Directive and the Mortgage Credit Directive. While ECJ rulings provide insight into exchange rate clauses and consumer equality issues, the Mortgage Credit Directive delivers a comprehensive framework for addressing restitution issues, including credit assessment and foreign currency lending rules.

By integrating the principles of consumer autonomy, equality, and protection against exchange rate risk, the Mortgage Credit Directive provides a valuable model for addressing the complexities of redemption claims in the context of foreign currency loans. Its principles are a valuable guide to judges, policymakers, regulators, and stakeholders, especially banks and consumer borrowers, seeking to navigate the challenging terrain of redress claims.

The paper is available here: 
https://ssrn.com/abstract=4405095

Nikolai Badenhoop is a Postdoctoral Researcher who heads the Leibniz Junior Research Group “Sustainable Finance Law in Europe” at SAFE.

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A passion for learning and an interest in solving complex problems are key to academic research. It is not surprising, then, that Olga’s research journey began in early childhood: “I have always been a bit academically inclined because I loved school. I loved learning about things and I’m lucky to have quite a good memory.”

Olga joined SAFE in October 2023 as a Postdoctoral Researcher for Household Finance. Fate brought her to SAFE, she suggests, for as soon as she heard about the position, she was confident her application would be accepted. Before joining SAFE, her passion for learning led her to study mathematical economics at the Higher School of Economics in Moscow. Olga’s identity is deeply rooted in her nationality. “Despite the political shadows cast over it, I don’t think that I will ever be able to deny my heritage.”

Looking back, Olga recalls the challenges and triumphs of tackling new subjects during her undergraduate studies, including in particular the dramatic progress she made in programming. “Going from the lowest grade on my first exam to the highest grade in basic C++ programming on my last exam is one of the accomplishments that I’m very proud of in my life,” she emphasizes.

Teaching became an integral part of her academic journey, providing short-term goals and opportunities to share her knowledge. Yet, as her research interests blossomed, she found herself drawn more towards pure research, albeit with occasional bittersweet feelings. “I think teaching helps to satisfy this need for short-term goals,” she admits, “but for now, I am very happy being in a pure research position.”

Motherhood has brought a new dimension to Olga’s life, forcing her to balance the demands of academia with the joys and responsibilities of raising her son. Despite the time constraints of childrearing, her passion for her work remains undiminished, fueled by the desire to set an example for her son and find fulfillment in her career. “It’s always heartbreaking when he asks why I don’t pick him up in the middle of the day,” she confides. However, whenever Olga is unable to fetch her son, her husband, Claes Bäckman, who is also a Postdoctoral Researcher at SAFE, is quick to assist. “I am very thankful to have a supporting husband like Claes who shares the mental load of being a parent with me equally.”

When she finds some time away from work, she loves to indulge in British detective stories and comic books. “I am quite the geek and love superheroes such as Captain Marvel and Wonder Woman.”

Olga Balakina transformed her childhood fascination with learning into a career as a researcher, allowing her to pursue her passion for problem-solving.
Peter Andre’s academic journey began in Bonn, where he earned both his Master’s and PhD; this was followed by a postdoctoral position at the former Institute on Behavior & Inequality. Reflecting on his early fascination with economics, Peter notes he “was always very excited by the idea of understanding something in depth.” Despite initially considering various subjects, he was drawn to economics for its social relevance and complexity. His passion for understanding complex issues – such as climate change and its impacts, or inequality – ultimately led him to specialize in the field. “I gravitated towards economics because I am interested in its social dimensions and its relevance to society,” Peter explains.

In academia, finding a good home can be a challenge. Yet for Peter, SAFE immediately fit the bill: “Here, I can focus on topics I love and have time for research. I also greatly value the opportunity to reach out to policymakers and journalists.” These are just a few reasons why he decided to join SAFE as the opportunity arose.

**MAKING A DIFFERENCE IN SOCIETY**

Since joining SAFE, Peter’s work has been guided by the desire to pursue knowledge and make a difference in society. “Research is most productive and most challenging when you ask yourself a question for which you don’t know the answer,” he remarks. While working in research can be challenging, Peter enjoys those moments that really boost his excitement and motivation. “Every now and then you have these small breakthroughs where you realize you understand a bit more,” he shares. “These occasions make me quite enthusiastic.”

Peter’s work in behavioral economics is characterized by its applied nature, which is a departure from the more foundational approach common in the field. By engaging with macroeconomics and exploring the intersection between psychology and economics, he offers fresh insights into how individuals perceive and interact with the world around them. “Most of the papers that I write are very applied,” he explains.

Currently, one of his research projects focuses on understanding how different groups of investors perceive and interpret the stock market. “The starting point for this project is the observation that if we want to understand financial markets and how people act on financial markets, we also need to understand how they make sense of financial markets.” In this way, Peter aims to shed light on the factors that influence market dynamics and individual behavior.

Outside of academia, he seeks peace in nature, frequently going on extended hikes to disconnect and recharge his mind. “Nature is the perfect antidote to research,” Peter remarks. Also, to relax from research, he finds great joy in traveling: “There are two things that motivate me to travel. One is to understand others’ perspectives on life – but that’s difficult. You need to actually live and work somewhere to delve into that deeply enough. The other motivation is just to see nature and leave the city.”

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**Exploring the depths of behavioral economics**

His passion for understanding the intricate ways in which individuals navigate economic decisions influences Peter Andre’s work as he explores people’s economic expectations, perceptions, and fairness views.
In March 2018, the European Commission presented an action plan for sustainable finance, including the EU Sustainable Finance Disclosure Regulation (SFDR), which aims to increase the transparency of financial products’ sustainability credentials, and the EU Taxonomy Regulation, which defines a list of environmentally sustainable economic activities. In the spring of 2022, the EU Commission supplemented the SFDR with regulatory technical standards applicable from January 2023 onward (SFDR Level 2). To shed light on the development of sustainability disclosure under the SFDR, we analyzed a dataset collected by WM Gruppe, a leading provider of financial information and data, on how more than 10,000 mutual funds and 2,000 index funds offered through banks in Germany disclosed sustainability aspects under the SFDR between September 2022 and March 2023.

To combat greenwashing, which means misleading investors by overstating sustainability-related information, the SFDR requires financial market participants and advisors to disclose pre-contractual and ongoing details regarding sustainability risks and associated negative sustainability impacts. The SFDR requires levels of disclosure based on three levels of sustainability: Article 6 products are conventional or gray financial products that do not promote any sustainability features; Article 6 products are conventional or gray financial products that do not promote any sustainability features;
Since the technical standards specifying the content, methodology, and presentation of disclosures under the SFDR came into effect on 1 January 2023, several funds have switched to a different category. The most notable redesignations involved funds moving from Article 9 to Article 8 in early 2023. For index funds, the downgrades from Article 9 to Article 8 resulted in a significant decline in Article 9 index funds from 98 funds in September 2022 to only 51 funds in March 2023.

As of January 2023, the SFDR requires financial products to disclose the minimum percentage of sustainable investments in pre-contractual documents and actual values in periodic reports. Among Article 8 funds, only one subcategory, known as “Article 8.5” or “Article 8 plus,” must disclose sustainable investments. As of March 2023, only 18 percent of Article 8 funds and ten percent of Article 9 funds had disclosed their share of sustainable investments in annual reports. By March 15, 2023, only eight percent of all funds had reported their sustainable investment holdings. However, given the SFDR requirements for annual reports published after 1 January 2023, we expect the number of funds disclosing their sustainable investment share to increase over the course of 2023, further strengthening transparency in the market for sustainable financial products.

ALIGNMENT WITH EU TAXONOMY

Between January 2022 and March 2023, a small proportion of reported investments were aligned with the Taxonomy Regulation. In 2022, Article 8 funds reported an average investment share of around one percent aligned with the EU Taxonomy, which decreased to 0.35 percent by March 2023. Article 9 funds initially reported a higher five percent share in 2022, which increased to nine percent by March 2023. In contrast, environmentally sustainable investments averaged 26 percent for Article 8 funds and 49 percent for Article 9 funds in March 2023, highlighting the need to broaden the scope of the EU Taxonomy.

Our results, namely the recent downgrades from Article 9 to Article 8 funds along with a higher share of sustainable investments in the group of Article 9 funds, suggest that the recent additions to and clarifications of the SFDR have indeed enhanced the specificity of the SFDR classifications, increasing their accuracy. However, we expect further changes as disclosures evolve in response to the new regulatory environment.

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8 products are light green financial products that promote social or environmental characteristics without sustainability as a core objective; and Article 9 products are dark green financial products that are specifically designed to achieve sustainable investment objectives. Because of its more stringent requirements, the group of Article 9 funds is significantly smaller than the other two classes, both for mutual and index funds.
2024 marks the tenth anniversary of the European Banking Union, which has been hailed as a successful response to the global financial crisis. The Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM) have been established as pillars of the Banking Union. Yet the European Deposit Insurance Scheme (EDIS) and Capital Markets Union (CMU) remain unfinished. Why has progress stalled on both of these projects? We discuss this issue with SAFE Senior Fellow Elke König.

“Europe needs to do the heavy lifting”
Ms. König, the Banking Union project was initiated to apply the lessons from 2008 and better manage future crises. While the SSM and SRM are in place, the EDIS has yet to be established. Under these circumstances, can the Banking Union be considered complete?

**ELKE KÖNIG:** An ounce of prevention is better than a pound of cure. The real success behind the Banking Union story is the SSM, which has significantly improved supervision and is a driving force behind banks being better capitalized, more liquid, and better prepared to meet challenges. Before the creation of the SSM, there were national rules and different interpretations of the Basel framework. Today, with few exceptions, banking supervision is truly harmonized across Europe. However, no supervisory framework is perfect, so it is important to have a safety net in the event of bank failure. This underscores the importance of the SRM, the second pillar of the Banking Union. Before 2015, Europe had no resolution framework, so taxpayers had to bail out failing banks to avoid financial instability. However, the resolution framework still needs to be completed. In particular, it requires a credible liquidity backstop. In addition, we still need the third pillar of the Banking Union, a harmonized European deposit insurance system.

Yet various countries such as Germany have been resistant to EDIS implementation.

**ELKE KÖNIG:** The EDIS is a complex issue, in part because Europe’s national deposit insurance systems are very different. Some national systems are just “pay boxes,” while others have broad, resolution-like powers. Furthermore, countries such as Germany rely on institutional protection schemes or have longstanding private deposit insurance schemes. When the debate on EDIS started, there was an inherent fear that deposit insurance would be used to repair holes in banks’ balance sheets, not least given exposure rates to non-performing loans in some countries. This dispute should have been overcome long ago. The SSM and national supervisors have focused on asset quality, but a national bias still exists. We saw this when proposals to change the framework for bank crisis management and deposit insurance (CMDI) were published: the reaction in Germany and some other countries was negative.

Can we consider CMDI an extension or a better version of EDIS?

**ELKE KÖNIG:** CMDI may pave the way for a future EDIS by addressing technical issues such as the so-called least-cost test and depositor preference. CMDI aims to harmonize certain aspects of national deposit insurance schemes. However, steps toward a European system have yet to be taken. At the risk of being blunt, when you have been pushing for something for ten years unsuccessfully, everyone gets a bit exhausted. Hence the idea behind CMDI: to try to take one step at a time. An amusing sidenote is that the Commission recently changed the acronym EDIS to “European Defense Industrial Strategy,” so perhaps we can get a new name and acronym, to help restart the debate.
Has Europe reached the point of exhaustion in the Capital Markets Union project? The EU Commission’s first Green Paper and subsequent CMU action plan date back to 2015.

**ELKE KÖNIG:** No one would disagree that we need a truly European capital market and European banking heavyweights, not just national champions. Unfortunately, the assessment offered by [former ECB Supervisory Board Chair] Andrea Enria is certainly correct: the European banking sector remains, by and large, a collection of national sectors. And the picture is no different in capital markets. While each country has its own capital market, no European market exists. As it stands, London is still our common capital market, which is an odd situation after Brexit, to say the least. To fix this, Europe finally needs to do the heavy lifting of harmonizing company, tax, and insolvency laws to pave the way for a more cohesive market. Otherwise, investors will always tend to prefer their national market, perpetuating fragmentation.

Is this what the EU Commission has in mind when it promotes the CMU and claims that it will be a source of efficiency gains in terms of new sources of financing for the real economy and closer integration of capital markets?

**ELKE KÖNIG:** This argument comes from the Commission or other European institutions, as well as from commercial banks. You need a deep and liquid capital market to finance the challenges ahead, such as the green transition. It’s a red flag when companies delist in Europe and relist in the US, because the capital market there is much more efficient in that respect. But it would be unfair to say that nothing has happened. Many small steps have been taken, and Europe is slowly moving in the right direction. But without tackling the heavy lifting, I am skeptical about progress. At the end of the day, this is about European competitiveness and autonomy. European banks and a European capital market are a prerequisite. Europe must become a single market to remain competitive in a changing world.
In addition to promoting growth and investment, the CMU is also seen as a safeguard against new crises, as it will distribute risk. Yet critics argue that risk sharing is no guarantee of safety, as countries such as Spain, Portugal, and Ireland already had high levels of financial intermediation at the time of the global financial crisis, but were also particularly hard hit.

**ELKE KÖNIG:** A European capital market is an opportunity for risk diversification, but that doesn’t mean it’s risk-free. The global financial crisis is probably not the best reference. At that time, there was far too little capital in the system, an over-reliance on ratings, and a lack of European supervision, let alone international cooperation. Of course, investors and markets need to have confidence and available countermeasures. After the crisis, Mervyn King, the former governor of the Bank of England, quipped that all banks were very international in life and became national in death. Let’s hope we have addressed this valid criticism with the resolution framework developed by the Financial Stability Board and its implementation in all major jurisdictions. The CMU is about a transparent and liquid European capital market, protecting investments according to a single set of rules.

While the Banking Union advocates expanded regulation and control of the banking market and other businesses, the CMU pushes for harmonization and reducing regulatory requirements. Could this be a contradiction in terms?

**ELKE KÖNIG:** Strong and well-capitalized banks are essential intermediaries in the marketplace, and they need regulation to protect investors when they finance long-term investments with short-term money. Banks need to be regulated but also have freedom to operate across borders without unnecessary bureaucracy. When we talk about reducing regulatory requirements for capital markets, we are talking first and foremost about harmonization. Remember that capital market regulation is currently predominantly national. So, there is a lot of room for simplification. The Banking Union, in particular the SSM, has addressed the problems of the past. Now it’s time to focus on a truly European banking system and a truly European capital market. We need real progress on these issues, not just minor tweaks on the margins.

Elke König
is a SAFE Senior Fellow and chaired the Single Resolution Board (SRB) from 2015 to 2022. From 2012 to 2014, she was President of the German Federal Financial Supervisory Authority (BaFin) and a representative of the Supervisory Board of the Single Supervisory Mechanism. After graduating in business administration and obtaining a doctorate, she worked for many years in the financial and insurance sector.
The people that make the place.
SAFE researchers were involved in a range of activities and events over the course of 2023.

Professor Christine Laudenbach, Director of SAFE’s Household Finance Department, spoke at an event on wealth inequality organized by the Center for Financial Studies, the Institut für Bank- und Finanzgeschichte e.V., the association “Frauen mit Format” of Goethe University and the House of Finance on 22 March 2023.

Incoming and outgoing directors: Florian Heider (left) and Jan Pieter Krahnen (right) at the welcome and farewell event held at Goethe University Frankfurt, where leaders from academia and politics bid farewell to Krahnen and welcomed his successor Heider.

SAFE Founding Director Emeritus Jan Pieter Krahnen delivered a farewell speech to a gathering of nearly 200 guests, in which he expressed gratitude to his colleagues for their time together.

Martina Brockmeier, President of the Leibniz Association, visited SAFE on 10 May 2023 for an exchange with the institute’s staff as part of her tour of all 97 Leibniz Institutes.

Members of the SAFE Policy Center and the SAFE Communications Department met with SAFE Senior Fellows for a workshop on 9 May 2023.

Professor Loriana Pelizzon, Deputy Scientific Director at SAFE, participated in a panel discussion with representatives from the private sector on “Sustainability Unleashed – Paving the Way for Financial Success” in Frankfurt on 5 October 2023.

Attendees of the First Annual Ph.D. Research Workshop on 6 and 7 November 2023 discussed “Challenges to the European Monetary and Financial System” together with SAFE Director Florian Heider.
SAFE Doctoral Student Lena Liebich presented at the First Bonn-Frankfurt-Mannheim Ph.D. Conference on 5 and 6 May 2023. Around 160 Ph.D. students in economics and finance from top graduate schools in Germany gathered to discuss research and career opportunities.

Participants of the 3rd Women in Law and Finance Workshop on the roof terrace of the Casino Building. The workshop was co-organized with the Center for Advanced Studies on the Foundations of Law and Finance at Goethe University Frankfurt on 22 May 2023.

SAFE Director Florian Heider hosted the farewell ceremony for his predecessor, Jan Pieter Krahnen, on 25 May 2023.

From left to right: Ioannis Asimakopoulos (Herbert Smith Freehills), Professor Tobias Tröger (Director of the SAFE Research Cluster Law & Finance), Samy Harraz (Single Resolution Board), Bernadette Seehafer (State of Hesse Permanent Representation to the EU), and Heinrich Wollny (European Commission, DG FISMA) on the roof of the State of Hesse’s Permanent Representation to the EU in Brussels as part of a SAFE Policy Lunch on 3 July 2023 to discuss the EU Commission’s proposal for CMDI framework reform.

SAFE Director Florian Heider during a session at the 50th Annual Meeting of the European Finance Association in Amsterdam, from 16 to 19 August 2023.

On 7 December 2023, a large part of the SAFE team set off from the House of Finance in Frankfurt on a hiking trip to the nearby Taunus mountains.
LORIANA PELIZZON JOINED SAFE’S MANAGEMENT BOARD

The composition of SAFE’s three-member Management Board has changed: Loriana Pelizzon, the Director of SAFE’s Financial Markets Research Department, has replaced Uwe Walz, effective 1 October 2023. Since then, Pelizzon has acted as Deputy Scientific Director of the Institute alongside Scientific Director Florian Heider and Administrative Director Muriel Büsser. SAFE’s Department Directors elect the Deputy Scientific Director, who is appointed by the institute’s Board of Trustees. The SAFE Management Board is responsible for the strategic management of the institute, including research program development and management, and associated financial planning, and reports to the institute’s Board of Trustees.

In 2013, Pelizzon became the first professor to accept a call to join the newly established LOEWE Center SAFE at Goethe University Frankfurt, the predecessor of today’s Leibniz Institute SAFE. She is also affiliated with the Ca’ Foscari University of Venice and the Sloan School of Management at the Massachusetts Institute of Technology (MIT). Her research interests include systemic and sovereign risk, hedge funds, market microstructure, and financial crises.

SAFE WELCOMED BEHAVIORAL ECONOMIST PETER ANDRE

Peter Andre joined SAFE as an Assistant Professor of Behavioral Finance on 1 October 2023. Before joining SAFE, he was a postdoctoral researcher at the Behavior & Inequality Research Institute at the University of Bonn, and was a visiting researcher at Harvard.

Peter Andre’s work in Behavioral Economics has been published in the Review of Economic Studies and has been covered by numerous national and international media. His paper “Shallow Meritocracy” (see page 9) was awarded with the Distinguished CESifo Affiliate Award in Behavioral Economics.

SAFE LEGAL SCHOLAR NIKOLAII BADENHOOP RECEIVED LEIBNIZ BEST MINDS GRANT

Nikolai Badenhoop, a Postdoctoral Researcher at SAFE, has been awarded a five-year grant in the Leibniz Best Minds 2024 Competition to lead a Leibniz Junior Research Group on “Sustainable Finance Law in Europe – Navigating between Regulation, Contractual Practice, Litigation, and Regulatory Competition.”

Only three out of 13 applications for a Leibniz Junior Research Group received a grant in this competition. Launched in early 2024, the project will analyze financial products that are advertised as sustainable, helping to navigate the multifaceted field of sustainable finance law in Europe. It will also make a valuable contribution to the emerging field of sustainable finance law and to the economic analysis of sustainable finance.
In the following section, we provide an overview of the institute’s personnel and financial resources as of the reporting date of 31 December 2023.
PUBLISHED PAPERS 2023

Abdel-Karim, B., Grahl, J., Hinz, O., Mihale-Wilson, C., and Rothlauf, F.

Anese, G., Corazza, M., Costola, M., and Pelizzon, L.

Badenhoop, N.
Greening Supply Chains and Their Financing under EU Law, in: Contracts for Responsible and Sustainable Supply Chains: Model Clauses, Legal Analysis, and Practical Discussion

Badenhoop, N. and Grundmann, S.
Restitutionsansprüche aus fremdwährungskrediten bei AGB-Nichtigkeit, in: Zeitschrift für Bank- und Kapitalmarktrecht, 8

Badenhoop, N. and Grundmann, S.

Bauer, K., Hinz, O., and von Zahn, M.
Expl(A)lined: The Impact of Explainable Artificial Intelligence on Users’ Information Processing, in: Information Systems Research, Vol. 34.

Beilner, M., Langenbucher, K., Radetzki, M.-T., Scheld, D., Sehorz, J., Stolper, O., and Tilk, P.

Bienz, C., Thorburn, K., and Walz, U.

Billio, M., Costola, M., Pelizzon, L., and Riedel, M.

Billio, M., Caporin, M., Frattarolo, L., and Pelizzon, L.

Billio, M., Caporin, M., Panzica, R., and Pelizzon, L.
The Impact of Network Connectivity on Factor Exposures, Asset Pricing and Portfolio Diversification, in: International Review of Economics & Finance, Vol. 84

Binder, J.-H.
To Ring-Fence or Not, and How? Strategic Questions for Post-Crisis Banking Reform in Europe, forthcoming in European Banking Regulation (CH Beck)

Cloud, C., Heß, S., and Kasinger, J.

Corhay, A., Kind, T., Kung, H., and Morales, G.

Costola, M., Hinz, O., Nofer, M., and Pelizzon, L.
Machine Learning Sentiment Analysis, COVID-19 News and Stock Market Reactions, in: Research in International Business and Finance, Vol. 64, Article 101881

Croce, M. M., Marchuk, T., and Schlag, C.

Curatola, G. and Dergunov, I.

Dergunov, I., Meinерding, C., and Schlag, C.

Di Nola, A., Kaas, L., and Wang, H.

Egorov, K. and Mukhin, D.

Eisenkopf, J., Juraneck, S., and Walz, U.

Essl, A., Kosfeld, M., Kröll, M. and von Bieberstein, F.

Faia, E. and Peseone, V.

Flögel, V., Schlag, C., and Zunft, C.
Momentum-Managed Equity Factors, in: Journal of Banking and Finance, Vol. 137, Article 106251

Freisleben, B., Hinz, O., Keller, K., Klein, A., Simon, B. and Sterz, A.

Gebhard, B. and Greth, J.
ELTIF 2.0 – der große Wurf für den Fondssstandort Europa?, in: Wertpapier Mitteilungen, Heft 23

Gebhard, B., Gebhardt, G., and Greth, J.
Zum Trennungsprinzip in der Einheits-GmbH & Co. KG, in: Neue Zeitschrift für Gesellschaftsrecht, 156

Gözlügöl, A. A.

Gözlügöl, A. A. and Ringe, W.-G.


Steuer, S. Common Ownership and Corporate Governance, in: Wirtschaft und Wettbewerb, Heft 01

Steuer, S. Klimaziele im Unternehmensrecht – Freiwillige Veraltbarungen und Perspektiven nach dem CSDD-Entwurf, in: Zeitschrift für Wirtschaftsrecht, Heft 44


Steuer, S. Umweltkommunikation in der Automobilwirtschaft, in: Recht, Automobil, Wirtschaft, Heft 2 (36)

Steuer, S. CO2-Kompensationen: “Quick Fix” durch Werbeverbot?, in: Recht, Automobil, Wirtschaft


Tröger, T. Better Integration of Chemical Pollution Research will Further Our Understanding of Biodiversity Loss, in: Nature Ecology & Evolution, Vol. 7
<table>
<thead>
<tr>
<th>Working Papers 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andre, P.</td>
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</table>

Detemple, J. and Kosfeld, M. | Fairness and Inequality in Institution Formation | SAFE Working Paper No. 402 |
Bagnara, M. and Goodarzi, M. | Corporate Segmentation-Based Sector Investing | SAFE Working Paper No. 397 |
Bauer, K., Hinz, O., and von Zahn, M. | Please Take Over: XAI, Delegation of Authority, and Domain Knowledge | SAFE Working Paper No. 394 |
Mücke, C. | Bank Dividend Restrictions and Banks’ Institutional Investors | SAFE Working Paper No. 392 |
Segal, G. and Shalaistovich, I. | Uncertainty, Risk, and Capital Growth | SAFE Working Paper No. 388 |
Radermacher, J.W. | Mamma Mia! Revealing Hidden Heterogeneity by PCA-Biplot – MPC Puzzle for Italy’s Elderly Poor | SAFE Working Paper No. 382 |
Goldfayn-Frank, O. and Vellekoop, N. | The Role of Personality Traits in Household Loan Expectations and Borrowing Constraints | SAFE Working Paper No. 381 |
In 2023, SAFE held a total of 44 events, including 12 policy forums, with more than 2600 participants and 601 presenters, 249 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 12 events were held wholly online.

### DATA CENTER WORKSHOPS

<table>
<thead>
<tr>
<th>2023</th>
<th>TITLE</th>
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</table>
| 4 April | SAFE Data Seminar
Introduction to ggplot2 – Create publication-ready graphs with R |
| 5 April | SAFE Data Seminar
A Beginner’s Guide to APIs: How to Retrieve Financial Data from Bloomberg, RWS (EIKON), and WRDS |
| 5 Oct | SAFE Research Data Seminar
Introduction to the Data Room |
| 10 Oct | SAFE Research Data Seminars
Introduction to R
Linear regression with R |
| 15 Nov | 2023 Annual Conference of efl
“Opportunities and Challenges of Generative AI” |

### POLICY EVENTS

<table>
<thead>
<tr>
<th>2023</th>
<th>TITLE</th>
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| 21 Feb | Stabilizing Financial Markets: Lending and Market Making as a Last Resort (web seminar)
joint with CEPR
Speaker: Stephen G. Cecchetti (Brandeis International Business School) |
| 3 April | European Lessons from Silicon Valley Bank Resolution (web seminar)
joint with CEPR
Speaker: Jan Pieter Krahnen, Loriana Pelizzon, and Tobias Tröger (all SAFE) |
| 17 May | LawLab-DFG Young Scholar’s Workshop on Algorithmic Price Discrimination in Financial Services
Speaker: Aditi Bagchi (Fordham School of Law) |
| 5 June | Presentation and Discussion of the May 2023 ECB Financial Stability Review (web seminar)
joint with CEPR
Speakers: Paul Hiebert, Benjamin Jens Klaus, Benedikt Kagerer, Ermanuele Franceschi (all ECB) |
Speakers: Hester Peirce (Securities and Exchange Commission, Washington D.C.), Mark Branson (Federal Financial Supervisory Authority BaFin) |
| 3 Jul | Policy Lunch “Commission Proposal for the Reform of the CMDI Framework – Driving Off With the Breaks On”
Speakers: Ioannis Asimakopoulos (Luxembourg), Samy Harraz (Single Resolution Board), Heinrich Wollny (European Commission) |
| 19 Sep | A Safe Core Mandate for Central Banks (web seminar)
joint with CEPR
Speaker: Enrico Perotti (Amsterdam) |
| 27 Sep | Carbon Emission Pledges and Corporate Decarbonization Initiatives Workshop
joint with CEPR |
| 8 Nov | Driving the Future: European Green Auto Securitisation Workshop
Speaker: Steven Ongena (Zurich) |
| 17 Nov | Financial Resilience after SVB (web seminar)
joint with CEPR
Speakers: Stephen G. Cecchetti (Brandeis International Business School), Vasso Ioannidou (Bayes Business School), Hugo Bänziger (Zurich) |
| 29 Nov | Presentation and Discussion of the November 2023 ECB Financial Stability Review (web seminar)
joint with CEPR
Speakers: Desislava Andreeva, Jan-Hannes Lang (both ECB) |
| 6 Dec | Vorstellung des Finanzstabilitätsberichts 2023 der Bundesbank (web seminar)
Speakers: Kirstin Hubrich, Frank Heid, Tobias Herbst, Simon Paetzold (all Deutsche Bundesbank) |
### RESEARCH CONFERENCES, WORKSHOPS, LECTURES & TALKS

#### 2023

<table>
<thead>
<tr>
<th>Date</th>
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<th>LOCATION</th>
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<tbody>
<tr>
<td>22 May</td>
<td>3rd Women in Law and Finance Workshop</td>
<td>Romagna</td>
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<tr>
<td>1-2 June</td>
<td>13th NYU-LawFin/Safe-Escp BS Law &amp; Banking/Finance Conference</td>
<td>Rome</td>
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<tr>
<td>7 June</td>
<td>Digital Finance Seminar: “Do humans use an algorithm as a complement or substitute to their decisions? Evidence from P2P Lending”</td>
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<td>13 June</td>
<td>Women's Network: Gender Representation in Economics Across Topics and Time: Evidence from the NBER</td>
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<tr>
<td>16-17 June</td>
<td>2023 Global Corporate Governance Colloquia (GCGC)</td>
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<tr>
<td>29 June</td>
<td>New Lessons from the Archives: The Evolving History of Central Banking</td>
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<tr>
<td>30 June</td>
<td>Lunch Talk: Women Bankers in Nineteenth Century America</td>
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#### 2022

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<tr>
<th>Date</th>
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<tr>
<td>5-7 Jul</td>
<td>2023 Cebra Annual Meeting</td>
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<tr>
<td>13-14 Jul</td>
<td>7th Household Finance Workshop</td>
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<tr>
<td>1 Sep</td>
<td>Day-Ahead PhD Workshop on Financial Intermediation</td>
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<tr>
<td>6-7 Sep</td>
<td>8th Conference on Global Insurance Supervision</td>
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<tr>
<td>25 Sep</td>
<td>7th SAFE Market Microstructure Conference</td>
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<tr>
<td>26 Sep</td>
<td>10th SAFE Asset Pricing Workshop</td>
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<tr>
<td>7 Nov</td>
<td>First Annual PhD Research Workshop</td>
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<tr>
<td>9-10 Nov</td>
<td>Annual autumn Conference 2023: Challenges for Financial Intermediaries and their Supervisors in the New (or Old?) Monetary Policy Normal</td>
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### VISITORS AT SAFE IN 2023

Brandeis International Business School, Waltham, Massachusetts; UNC Kenan-Flagler Business School, Chapel Hill, North Carolina; Federal Reserve Bank of Chicago; Federal Reserve Board, New York University, NYU Stern School of Business, University of Texas, Austin; University of North Carolina Chapel Hill; Harvard Law School, Cambridge, Massachusetts; University of California, Berkeley; University of Washington, Seattle; Kelley School of Business at Indiana University; Boston College, Massachusetts; Washington University in St. Louis, Missouri.
### SAFE MEMBERS

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION</th>
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<tbody>
<tr>
<td>Christina Bannier</td>
<td>Professor of Banking &amp; Finance at Justus-Liebig-University Gießen</td>
</tr>
<tr>
<td>Günter Beck</td>
<td>Professor at the University of Siegen, Chair for European Macroeconomics</td>
</tr>
<tr>
<td>Volker Brühl</td>
<td>Managing Director of the Center for Financial Studies</td>
</tr>
<tr>
<td>Muriel Busser</td>
<td>Administrative Director at SAFE</td>
</tr>
<tr>
<td>Albrecht Cordes</td>
<td>Professor of Medieval and Modern Legal History and of Civil Law at Goethe University Frankfurt</td>
</tr>
<tr>
<td>Lut de Moor</td>
<td>Head of Research Funding at SAFE</td>
</tr>
<tr>
<td>Lutz Johanning</td>
<td>Professor at the Otto Beisheim School of Management, Chair of Empirical Capital Market Research</td>
</tr>
<tr>
<td>Kristian Kersting</td>
<td>Professor at the Computer Science Department and Head of the Artificial Intelligence and Machine Learning (AIML) Lab at TU Darmstadt University</td>
</tr>
<tr>
<td>Rainer Klump</td>
<td>Professor of Economics and Executive Director of the House of Finance at Goethe University Frankfurt</td>
</tr>
<tr>
<td>Wolfgang König</td>
<td>Professor at Goethe University Frankfurt, Chair of Business Administration esp. Information Systems</td>
</tr>
<tr>
<td>Jan Pieter Krahnen</td>
<td>Founding Director emeritus of SAFE and Professor emeritus of Finance at Goethe University Frankfurt</td>
</tr>
<tr>
<td>Raimond Maurer</td>
<td>Professor of Investment, Portfolio Management and Pension Finance at Goethe University Frankfurt</td>
</tr>
<tr>
<td>Emanuel Mönch</td>
<td>Professor of Financial and Monetary Economics at Frankfurt School of Finance &amp; Management</td>
</tr>
<tr>
<td>Alexander Morell</td>
<td>Professor of Business Law and Economics at Goethe University Frankfurt and SAFE Bridge Professor</td>
</tr>
<tr>
<td>Marc Steffen Rapp</td>
<td>Professor of Business Administration at Philipps University of Marburg</td>
</tr>
<tr>
<td>Christian Schlag</td>
<td>Professor of Finance at Goethe University Frankfurt and SAFE Coordinator Young Researchers</td>
</tr>
<tr>
<td>Bettina Stark-Watzinger</td>
<td>German Federal Minister for Education and Research</td>
</tr>
<tr>
<td>Erik Theissen</td>
<td>Professor of Finance at University of Mannheim</td>
</tr>
<tr>
<td>Uwe Walt</td>
<td>Professor of Economics at Goethe University Frankfurt, Chair of Industrial Organization</td>
</tr>
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### SAFE BOARD OF TRUSTEES

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION</th>
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<tbody>
<tr>
<td>Dr. Elga Bartsch</td>
<td>Director General at the German Federal Ministry for Economic Affairs and Climate Action and Deputy Chairperson of the SAFE Board of Trustees</td>
</tr>
<tr>
<td>Prof. Dr. R. Alexander Lorz</td>
<td>Hessian Minister of Finance</td>
</tr>
<tr>
<td>Dr. Detlef Fechtner</td>
<td>Chief Political Correspondent, Börsen-Zeitung</td>
</tr>
<tr>
<td>Prof. Thomas Paul Gehrig, Ph.D.</td>
<td>Professor of Finance at the University of Vienna</td>
</tr>
<tr>
<td>Timon Gremmels</td>
<td>Hessian Minister of Higher Education, Research, and the Arts and Chairperson of the SAFE Board of Trustees</td>
</tr>
<tr>
<td>Dr. Friederike Köhler-Geib</td>
<td>Chief Economist at KfW Group</td>
</tr>
<tr>
<td>Dr. Wolf Heinrich Reuter</td>
<td>Head of Department for Fiscal Policy and Economic Policy Issues at the German Federal Ministry of Finance</td>
</tr>
<tr>
<td>Prof. Dr. Enrico Schleiff</td>
<td>President of Goethe University Frankfurt</td>
</tr>
<tr>
<td>Prof. Dr. Axel. A. Weber</td>
<td>President of the Center for Financial Studies</td>
</tr>
<tr>
<td>Daniela Weber-Rey</td>
<td>Lawyer, Supervisory Board Member</td>
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### 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.

<table>
<thead>
<tr>
<th>NAME</th>
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<tbody>
<tr>
<td>Prof. Dr. Lars Kloth, LL.M.</td>
<td>Professor of Civil and Business Law at Humboldt University of Berlin</td>
</tr>
<tr>
<td>Prof. Theresa Kuchler, Ph.D.</td>
<td>Associate Professor of Finance at the Stern School of Business, New York University</td>
</tr>
<tr>
<td>Prof. Luc Laeven, Ph.D.</td>
<td>Professor of Finance at Tilburg University and Director-General of the Research Department of the European Central Bank</td>
</tr>
<tr>
<td>Prof. Katya Malinova, Ph.D.</td>
<td>Associate Professor at the DeGroote School of Business, McMaster University</td>
</tr>
<tr>
<td>Prof. Ulrike Malmendier, Ph.D.</td>
<td>Professor of Finance at the University of California, Berkeley</td>
</tr>
<tr>
<td>Prof. Dr. Emanuel Mönch</td>
<td>Professor of Financial and Monetary Economics at Frankfurt School of Finance &amp; Management</td>
</tr>
<tr>
<td>Prof. Martin Oehmke, Ph.D.</td>
<td>Professor of Finance at the London School of Economics</td>
</tr>
<tr>
<td>Prof. Steven Ongena, Ph.D.</td>
<td>Professor of Banking at the University of Zurich</td>
</tr>
<tr>
<td>Prof. Dr. Katharina Pistor</td>
<td>Edwin B. Parker Professor of Comparative Law at Columbia Law School and Vice Chairperson of the SAFE Research Advisory Council</td>
</tr>
<tr>
<td>Prof. Zacharias Sautner, Ph.D.</td>
<td>Professor of Sustainable Finance at the University of Zurich</td>
</tr>
<tr>
<td>Frank Smets, Ph.D.</td>
<td>Adviser in the Counsel to the Executive Board at the European Central Bank</td>
</tr>
<tr>
<td>Prof. Dr. Cornelia Woll</td>
<td>President of the Hertie School Berlin and Professor of International Political Economy</td>
</tr>
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### SAFE POLICY ADVISORY COUNCIL

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.

<table>
<thead>
<tr>
<th>NAME</th>
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<tbody>
<tr>
<td>Lorenzo Bini Smaghi, Ph.D.</td>
<td>Chairman of the Board of Directors at Société Générale</td>
</tr>
<tr>
<td>Michael Boddenberg</td>
<td>State Minister of Finance in Hesse, Germany</td>
</tr>
<tr>
<td>Sven Giegold</td>
<td>State Secretary at the Federal Ministry for Economic Affairs and Climate Action</td>
</tr>
<tr>
<td>Kerstin af Jochnik</td>
<td>Member of the Supervisory Board of the Single Supervisory Mechanism</td>
</tr>
<tr>
<td>Dr. Jörg Kukies</td>
<td>State Secretary at the German Chancellery</td>
</tr>
<tr>
<td>Emmanuel Moulin</td>
<td>Director General of the French Treasury</td>
</tr>
<tr>
<td>Gwyneth Nurse</td>
<td>Director General, Financial Services at HM Treasury</td>
</tr>
<tr>
<td>Tuomas Saarenheimo, Ph.D.</td>
<td>Chairman of the Economic and Financial Committee of the European Union</td>
</tr>
<tr>
<td>Bettina Stark-Watzinger</td>
<td>German Federal Minister for Education and Research</td>
</tr>
<tr>
<td>Prof. Dr. Joachim Wuermeling</td>
<td>Member of the Executive Board of Deutsche Bundesbank (until 31st December 2023; Executive in Residence, Institute for Deep Tech Innovation, ESMT Berlin)</td>
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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.