

## Whatever it takes: The Real Effects of Unconventional Monetary Policy\_4

Viral V. Acharya • Tim Eisert • Christian Eufinger • Christian Hirsch

## The Bail-In Tracker: Does the new EU Regulation on Bank Recovery and Resolution Work?\_8

Martin Götz

## Central Counterparty Clearing Houses Should be Supervised by the SSM\_10

Jan Pieter Krahnem • Lorian Pelizzon

## IMPRINT

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## About SAFE

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

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

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

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## Editorial



Jan Pieter Krahnem

Director, SAFE

We have seen immense volatility in banking markets during the last weeks. As this example shows, it only takes a little bad news, sometimes only rumors, to take a banking institution almost to the edge of the abyss. Economists call such an event a sunspot equilibrium: All of a sudden, some sort of externality deeply affects economic outcomes in a way that is not based on economic fundamentals. Especially in banking markets, the mere possibility of a sunspot equilibrium calls for caution among commentators: In this sector, rumors can easily turn into self-fulfilling prophecies as a bank run has self-enforcing effects that soon become irreversible, even if the institution in question is basically sound and solid.

Of course, companies that are tremendously successful will be less vulnerable to sunspot equilibria than those that are going through difficult times anyway. But in the banking sector, you will currently find more of, if not exclusively, the latter. Especially European banks suffer not only from low interest rates and new regulation. They have also failed to convincingly re-orientate themselves since the financial crisis, to present a new striking business model and to come up with sparkling ideas and a persuasive growth story.

Given that Europe seems significantly overbanked, growth can no longer be achieved by the sector as a whole but only by a smaller number of institutions joining forces through mergers and takeovers. What Europe needs is a reasonable number of well diversified pan-European banks instead of national champions.

Pan-European banks are necessary companions for pan-European firms that operate in a pan-European market. By setting up the banking union, a single supervisory and a single resolution regime, the EU has drawn the right lesson from the financial crisis. The logical next step would be to encourage transnational mergers and takeovers among European banks. Besides creating new global business opportunities, this would also substantially alleviate the intermeshing of bank risks and national state budgets – one of the main causes of the European government debt crisis.

So far, European politicians and regulators have not taken steps in this direction. Rather, EU member states, via banking supervision, have put up further hurdles, e.g. for transnational risk balancing within holdings, in order to protect national banks from crises in neighboring countries. Against this background, I would like to encourage the search for an intelligent institutional design that overcomes the now existing political concerns. This will be an effort worth undertaking.

Yours sincerely,  
Jan Pieter Krahnem

# Whatever it takes: The Real Effects of Unconventional Monetary Policy



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At the peak of the European debt crisis in 2012, anxiety about excessive national debt led to interest rates on government bonds issued by countries in the European periphery that were considered unsustainable, endangering the Eurozone as a whole. In response, the President of the European Central Bank (ECB), Mario Draghi, introduced the Outright Monetary Transactions (OMT) program by stating on July 26, 2012 that “[...] the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough.” In our paper we analyze the effect of the OMT program announcement on bank lending and the resulting impact on the real economy.

Once activated towards a specific country, the OMT program allows the ECB to buy a theoretically unlimited amount of a country’s government bonds in secondary markets. Even though the OMT program has not actually been activated yet, there is clear empirical evidence (e.g. Krishnamurthy et al., 2015) that the pure announcement effect of the OMT program caused

a significant lowering of spreads of sovereign bonds issued by distressed European countries (see Figure 1). In this regard the OMT program announcement has been a major success in preventing a potential break-up of the euro area.

## The impact of OMT on undercapitalized banks

Apart from its impact on sovereign bond spreads, the OMT program announcement also had significant effects on the European banking sector as a substantial amount of sovereign bonds was held on the balance sheets of domestic banks. Based on a new self-compiled pan-European dataset, which includes borrower-lender linkages as well as information on loan characteristics and borrower balance sheets, we empirically analyze the effect of the OMT program announcement on bank lending and the resulting impact on the real economy.

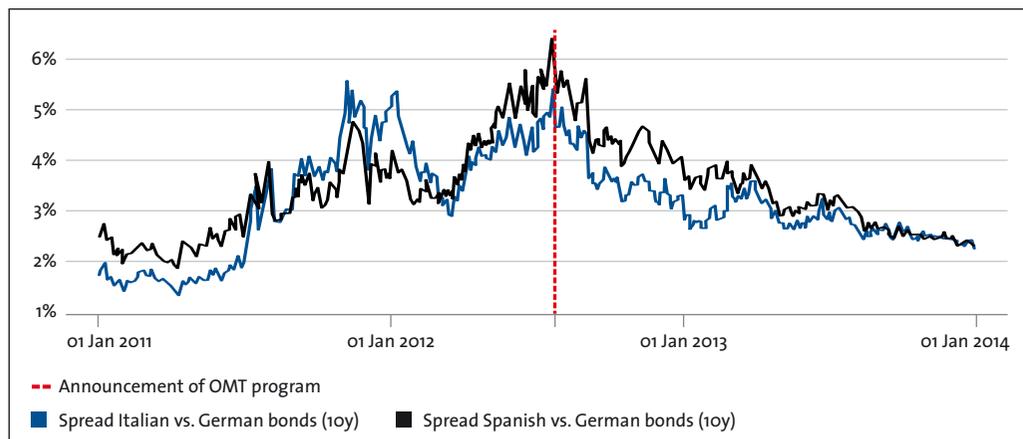
In our paper, we come to three major results. First, we show that the value increase of sovereign bonds caused by the OMT program announcement helped to restore the stability of the European banking system. The reason is that banks with significant holdings of government

bonds issued by stressed European countries (especially Greece, Ireland, Italy, Portugal and Spain (GIIPS)) experienced substantial windfall gains, resulting in a backdoor (indirect) bank recapitalization.

However, while the example shows that an indirect recapitalization measure like the OMT program allows central banks to target the recapitalization of banks that hold troublesome assets, it also reveals that central banks are not able to tailor the amount of the recapitalization to a bank’s specific capital needs. Therefore, even though European banks regained some lending capacity due to the recapitalization effect of the OMT announcement, some of these banks still remained weakly capitalized after the announcement.

## Loan evergreening

Second, we document that the resulting improvement in bank health led to an increase in loans available to firms. In particular, the results of our lending regressions indicate that especially low-quality borrowers benefited from the increased loan volume in the period follow-



**Figure 1:** Evolution of the times series of Italian and Spanish 10-year government bond spreads relative to German government bonds.

ing the OMT program announcement. In contrast, the loan volume extended to high-quality borrowers did not increase.

Following Caballero et al. (2008) and Giannetti and Simonov (2013), we show that undercapitalized banks extended loans to existing low-quality borrowers at interest rates that were below the rates paid by the most creditworthy European borrowers (high-quality public borrowers in non-GIIPS European countries). This result is consistent with the incentives of undercapitalized banks to misallocate credit towards existing impaired borrowers – a strategy that is commonly known as “loan evergreening” or “zombie lending”. In particular undercapitalized

banks have an incentive to roll over loans from existing borrowers that struggle financially. Due to these zombie loans, the impaired borrowers acquire enough liquidity to be able to meet their payments on outstanding loan commitments. Thereby, banks can avoid having to declare the outstanding loans as non-performing which would lower the banks’ net operating income, force them to raise provisioning levels and increase the likelihood that they violate their minimum capital requirements.

#### Zombie distortions

Third, we analyze whether the rise in zombie firms after the OMT program announcement had an impact on non-zombie firms operating in

the same industries as one can assume that the “loan evergreening” behavior by undercapitalized banks could lead to a crowding-out of credit to more productive and creditworthy firms operating in the same industries as existing zombie firms. Building on the analysis of Caballero et al. (2008), we document that high-quality non-zombie firms indeed suffered from an increased presence of zombie firms in their industries: Both their investment and employment growth rates were significantly lower compared to high-quality non-zombie firms active in industries without a high prevalence of zombie firms. In particular, high-quality non-zombie firms in industries with an average increase in the fraction of zombie firms (i.e., 8.9 %) invested between 11.6 % and 13.3 % less capital and had between 3.6 % to 4.4 % lower employment growth rates compared to a scenario where the fraction of zombies would have stayed at its pre-OMT level.

Our analysis hence highlights the importance of recapitalizing banks adequately to prevent them from engaging in zombie lending. While the launch of the OMT program helped to avert a collapse of the eurozone by stabilizing government bond yields and (partially) restoring financial stability, combining the program with a targeted bank recapitalization program would most likely have induced a much stronger economic recovery.

#### References

**Caballero, R. J., Hoshi, T. and A. K. Kashyap** (2008) “Zombie Lending and Depressed Restructuring in Japan”, *American Economic Review*, Vol. 98, Issue 5, pp. 1943-77.

**Giannetti, M. and A. Simonov** (2013) “On the Real Effects of Bank Bailouts: Micro Evidence from Japan”, *American Economic Journal: Macroeconomics*, Vol. 5, Issue 1, pp. 135-67.

**Krishnamurthy, A., Nagel, S. and A. Vissing-Jorgensen** (2015) “ECB Policies Involving Government Bond Purchases: Impact and Channels”, Working Paper.

**Peek, J. and E. S. Rosengreen** (2005) “Unnatural Selection: Perverse Incentives and the Allocation of Credit in Japan”, *American Economic Review*, Vol. 95, Issue 4, pp. 1144-66.

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# New Regulatory Approach to Curb Bank Risk-Taking: Incentive-Based Capital Requirements



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In response to the 2008–2009 financial crisis that exposed the excessive risk-taking of banks, legislators have sought to curb risk-taking incentives in the financial sector. Since the risky investment behavior of many financial institutions can often be directly linked to the compensation schemes of their managers, it has been argued that aligning executive pay arrangements with the interests of banks' shareholders may limit excessive risk-taking. However, bank shareholders may have strong risk-shifting incentives due to government guarantees. Hence, shareholder empowerment aggravates the excessive risk problem because shareholders will simply pass on their risk-shifting incentives to bank managers. In this paper, we thus propose a new regulatory approach that involves capital requirements that are contingent on managerial compensation. This approach utilizes the compensation scheme to drive a wedge between the interests of top management and shareholders, counteracting shareholder risk-shifting incentives.

In the absence of regulation, shareholders design the compensation contracts of the top management such that the managers' incentives are in line with their own risk-taking incentives. This form of risk-shifting classically creates problems between debtholders and shareholders when debtholders are unable to obtain adequate adjustments of risk premiums in case the investment risk increases. This problem is particularly relevant for banks because of their high leverage and the relative ease with which they can change the degree of risk of their business activities.

In the case of financial institutions, an even more severe risk-shifting problem arises when governments implicitly or explicitly guarantee a part of the banks' deposits or borrowed funds. Targeted at preventing panic-based bank runs and interbank contagion, these guarantees limit the downside risk of debt and, in turn, increase the expected repayment to debtholders. As a result, the incentive of insured debtholders to monitor bank risk is weakened, and they do not appropriately adjust debt costs for risk. Consequently, insured debt is comparatively inexpensive, and banks are incentivized to increase

their leverage and to invest in very risky assets. Ultimately, this behavior resulting from the presence of government guarantees increases banks' default probability.

## Limitations of risk-weighted capital requirements

This problem justifies regulatory intervention which so far has been characterized by the implementation of risk-weighted capital requirements. These rely on a determination of the riskiness of bank assets which requires detailed knowledge of the banks' asset portfolios as well as an extremely sophisticated understanding of risk modeling. The 2008–2009 financial crisis revealed that measuring bank asset risk is a difficult task because risk modeling has strong limitations. In addition, with risk-weighted capital requirements, banks have an incentive to understate their asset risk and to engage in regulatory capital arbitrage.

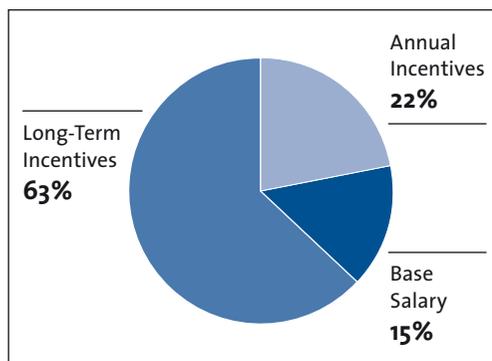
Hence, various academics have advocated for substantially higher and non-risk-weighted capital requirements in banking, which could potentially reduce banks' default probability. How-

ever, as long as banks are still allowed to take on debt that is protected by some sort of government guarantee, risk-shifting incentives prevail. Therefore, even with higher and non-risk-weighted capital requirements, shareholders still have an incentive to put incentive schemes in place that encourage the bank management to take on excessive risk.

### Trade-off between leverage and risk-taking incentives

Against this background, we propose a new regulatory approach that involves capital requirements that are contingent on managerial compensation. This approach utilizes the compensation scheme to drive a wedge between the interests of top management and shareholders, counteracting shareholder risk-shifting incentives. Bebchuk and Spamann (2010) argue that monitoring compensation structures improves the overall effectiveness of banking regulation because information about pay structures can be used to produce a better fit between capital requirements and the investment risks posed by individual banks.

We present a model that provides a theoretical justification for this argument. We show



**Figure 1:** Performance-based top-management compensation in large U.S. banks, consisting of long-term incentives (e.g. shares and options), annual incentives (e.g. cash bonuses) and a base salary. Source: O'Donnell and Rodda (2015)

that incentive features of the managerial compensation scheme provide valuable information about shareholder objectives, which can help the regulator reduce their information disadvantages vis-a-vis bank managers. Our proposed regulation stipulates a higher minimum capital requirement for banks that remunerate their management using a relatively high performance-based wage component and a relatively low fixed payment. Conversely, banks that implement a conservative compensation structure can be allowed a (potentially) riskier capital

structure because the risk-shifting incentives induced by government guarantees and high leverage are offset by the remuneration structure. Banks thus face a trade-off between leverage and the risk-taking incentives embedded in their executive compensation contract.

### Transparency about compensation structure

For this approach to be effective, the regulator must be able to gather information about the managers' compensation structure, which of course implies certain transparency requirements. In response to the 2008–2009 financial crisis, regulators around the world have been pushing for exactly this type of transparency. According to the “Principles for Sound Compensation Practices” published by the Financial Stability Board, banks should be required to disclose the process used to determine their compensation policy, the criteria used for performance and risk measurement, the pay-performance link and the parameters used to allocate cash versus other forms of compensation.

O'Donnell and Rodda (2015) report that only 10% of banks use a fully discretionary approach to determine the annual performance-based

payment. Since 90% of banks are using a formulaic approach anyway, it does not seem overly restrictive to introduce a regulation requiring all banks to base a high fraction of the performance-based compensation on a transparent formulaic approach. This transparency requirement would allow regulators to appropriately adjust the incentive-based capital requirement, thus curtailing incentives for risk-shifting, which, in turn, would lead to overall welfare improvements.

### References

- Bebchuk, L. A. and H. Spamann** (2010) “Regulating Bankers' Pay”, Georgetown Law Journal, Vol. 98, Issue 2, pp. 247-287.
- O'Donnell, S. and D. Rodda** (2015) “Executive Compensation in the Banking Industry. Emerging Trends and Best Practices for 2014-2015”, White Paper, Meridian Compensation Partners.
- The paper is forthcoming in Management Science and available at: <http://safe-frankfurt.de/incentive-based-capital-requirements>*

Interview:

## The Bail-In Tracker: Does the new EU Regulation on Bank Recovery and Resolution Work?



Martin Götz  
Goethe University & SAFE

Martin Götz is Professor for Regulation and Stability of Financial Institutions at the Research Center SAFE at Goethe University Frankfurt. His research interests lie in financial economics, banking and applied microeconomics. From 2010 to 2013, Götz worked as a Financial Economist in the Risk and Policy Analysis Unit at the Federal Reserve Bank of Boston. He earned a Ph.D. in Economics from Brown University, Providence/Rhode Island, in May 2010, and an M.Sc. in Financial and Industrial Economics from Royal Holloway, University of London.

**SAFE has recently launched the “Bail-In Tracker”, a project of SAFE Law Professor Tobias Tröger, Stephan Lorz (Börsen-Zeitung) and you. What is the project about?**

The idea of the Bail-In Tracker is to provide information about the applicability of the new European bail-in regulation laid out in the Bank Recovery and Resolution Directive (BRRD). The BRRD constitutes a legal framework that allows resolution authorities to force banks' creditors to share the burden in case of financial distress by converting parts of their debt into equity (bail-in). A waterfall principle specifies the order in which specific liabilities of banks are subject to a bail-in. A bank's subordinated debt is the first debt instrument to be bailed in if the bail-in of the bank's Tier 2 capital is not sufficient. To investigate how effective the new bail-in regulation might be, we collected publicly available information on the amount of outstanding subordinated debt of 36 large European banks headquartered in 15 European countries. Based on these data, the Bail-In Tracker provides regularly updated information on the magnitude of a potential bail-in at one of these banks with re-

spect to one of the most critical balance-sheet positions. Furthermore, we make the data and methodology available on our website.

**What are your findings after reviewing the data?**

We find that the aggregated amount of outstanding subordinated debt at large European banks has increased overall in our sample period which goes back to July 2011. On the one hand, this indicates that there is a larger portion of these financial securities in the market that could be subject to a bail-in. On the other hand, banks in our sample have also grown in recent years so that the share of subordinated debt in the percentage of total liabilities has remained fairly stable over the sample period, at a little less than 3 percent. In a separate study (Götz and Tröger 2016), we look at individual institutions and find that banks that hold less equity capital tend to have a higher level of subordinated debt. This is interesting because banks with smaller equity ratios have less of an equity buffer and hence the outstanding subordinated debt of these banks may be more likely to be subject to a bail-in.

**Have banks adjusted their balance sheets since the adoption of BRRD?**

We are very interested in getting answers to this question. One could imagine that, for example, banks have moved out of the segment of subordinated debt as it has now become riskier for investors. These might prefer to invest in banks by using other instruments that are less likely to be bailed in when things get tough. Unfortunately, as there is a variety of possibilities for banks to adjust their balance sheets as a reaction to the new regulation, more granular data is needed to look into this particular question in more detail. These data are collected by resolution authorities, but they are not available to the public. So I hope that we will see some studies from these institutions in the future that examine this question.

**Are there differences across countries with respect to the level of subordinated bank debt?**

We found some striking differences across banks headquartered in different European countries (see Figure 1). For example, banks in the United Kingdom tend to rely more on subor-

minated debt in their financing than banks from other countries: About 6 percent in 2011 and now more than 7.5 percent of their liabilities is publicly traded subordinated debt. This is due to a different culture of bank financing in the UK where subordinated debt has always been a more common form of bank financing. At the other end of the spectrum are financial institutions in Greece, Denmark and Spain. Banks in these countries have on average a very small share of their liabilities in subordinated debt – only about 1 percent. In all three countries the share has also considerably decreased during the last five years. This is not surprising when you consider Greek banks and all the trouble they have gone through in recent years. Their capital structure has changed substantial-

ly and it will take more time for them to go back to capital markets and issue subordinated debt as a means of financing.

#### You also looked into the currency of subordinated bonds.

Yes, it was interesting for us to see that banks headquartered in the eurozone issue about 15 percent of their subordinated debt in a currency other than the euro. Most of these bonds are issued in US dollars, the second most common currency are British pounds. Over the sample period, the amount of subordinated debt issued in a currency other than the euro slightly increased (see Figure 2). Looking into this subject in detail, it seems that the larger the bank, the larger is also the share of subordi-

nated debt in a currency different than the euro. The increase in bonds issued in another currency is most probably due to better market conditions and the opportunity to address different investors. We are interested in this pattern as it may influence the applicability of BRRD – particularly as issuances in foreign currencies involve a currency risk. This has to be kept in mind when evaluating the total amount of subordinated debt and the question of whether this would be sufficient in times of distress or not.

#### A further finding is about the company level that issued the debt instrument ...

We analyzed whether banks issued subordinated debt at the parent level or at a subsidiary

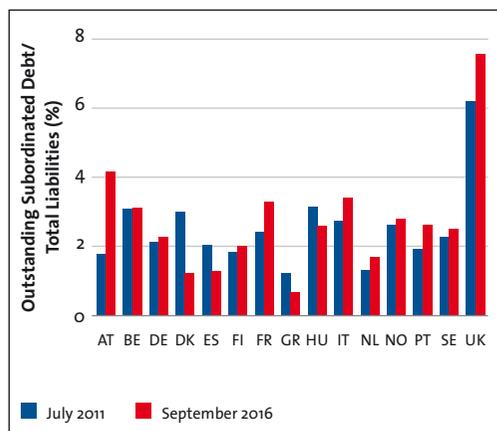
or affiliate level. On average, about a quarter of outstanding subordinated debt is issued at a subsidiary level with a slight decrease over the sample period (see Figure 3). With respect to BRRD, this issuance behavior adds a further level of complexity. Debt issued by a subsidiary might, for example, be subject to a different jurisdiction, different market reactions and so on.

With respect to all our results, however, more research is needed to further examine the motivation that drives banks to issue their debt in this way or the other. We plan to look into all these questions in more detail and we hope that our data collection encourages other researchers to conduct their own studies on the topic.

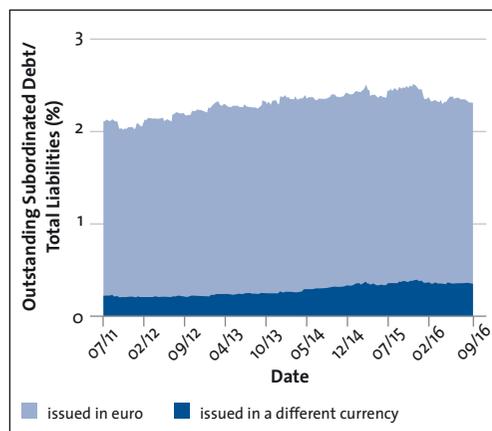
*The Bail-In Tracker ([www.bail-in-tracker.eu](http://www.bail-in-tracker.eu)) is an interdisciplinary project by the Research Center SAFE in cooperation with Boersen-Zeitung, funded by the VolkswagenStiftung in the context of the project “Science and Data Journalism”.*

#### References

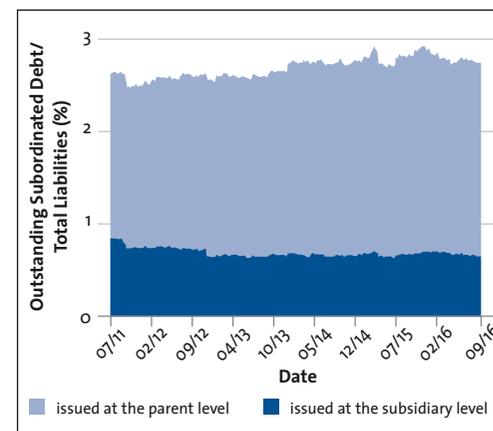
**Götz, M. and T. Tröger (2016)** “Should the Marketing of Subordinated Debt be Restricted/Different in One Way or the Other? What to do in the Case of Mis-Selling?”, SAFE Policy White Paper No. 35.



**Figure 1:** Average share of outstanding public subordinated debt in total liabilities across countries in July 2011 and September 2016.



**Figure 2:** Average ratio of banks' outstanding public subordinated debt, issued in euro or other currencies.



**Figure 3:** Average ratio of banks' outstanding public subordinated debt, issued at the parent or subsidiary level.

# Central Counterparty Clearing Houses Should be Supervised by the SSM



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New regulation in the U.S. (Dodd-Frank Act) and in Europe (EMIR) renders the involvement of a central counterparty (CCP) mandatory for standardized OTC derivatives' trading. We argue that, from a macrofinance perspective, CCPs provide a trade-off between reduced contagion risk in the financial industry and the creation of a significant systemic risk which may undermine the stability of the entire financial system. To contain this risk we suggest a single authority supervising all competing CCPs.



Lorian Pelizzon  
Goethe University & SAFE

Derivative transactions are intertemporal by nature and thus require some sort of credit relationship between the counterparties. Therefore, a counterparty credit default is an important risk inherent to any derivative contract. While in organized futures markets the exchange acts as a single counterparty for both contracting partners defining mutual collateral requirements, in centrally cleared OTC markets the CCP takes on this role. It will request collateral postings from its customers based on the value-at-risk-methodology which will be adjusted continuously.

If a customer has more than one derivative exposure, for example in different instruments, with different maturities or at different market places, the sum of the counterparty risks involved in these transactions may be reduced through diversification (or hedging if exposures are of different sign). As a consequence, bringing two different exposures of the same client on one CCP gives room for a reduction of the required collateral. This advantage of multilateral netting is the driving force behind the natural monopoly characteristic of CCP operations.

## Competition and predatory margining

It is selfevident that the stability of a financial system with multiple CCPs critically depends on the margin requirements at each CCP. However, with more than one CCP operating in a particular market, there is competition for market share which may lead to an undercutting in margin levels, a competitive underpricing which we call "predatory margining". Moreover, fueled by the natural monopoly property of the CCP business, one can expect this competition to end up in an equilibrium with only few (or maybe just one) CCPs with very low margin requirements.

From the perspective of an individual CCP, underpricing may prove to be a profitable strategy if it remains temporary and serves the purpose of gaining market share. At the level of the market as a whole, however, predatory margining implies concurrent suboptimal levels of collateral, thereby increasing the risk of a CCP default. Moreover, as lowering margin requirements may be the strategy pursued by all competing CCPs simultaneously, this imposes an external effect on the systemic risk level in the market which is difficult to observe – and unpriced. The bigger

the CCP, the more severe will be the respective systemic risk event. Despite a waterfall of safety layers in the CCPs' liability structure it is likely that such an event will trigger a complete collapse of the financial system due to a run on its banks and other runnable institutions. Government bailout will be inevitable.

#### Need for a single supervisor

Supervision of CCPs is currently organized in a decentralized setting. While the European Securities and Markets Authority (ESMA) defines the general supervisory principles and rules, the actual supervisory job is done by national institutions, accompanied by international colleges. Given that most large clients have exposures with several CCPs in more than one country at the same time, the information about counterparty risk is necessarily incomplete. Moreover, regional or national approaches to supervision always entail a regulatory capture potential.

Both inefficiencies could be avoided if supervisors coordinate among themselves, fixing margining requirements at a uniform level and abstracting from any competitive considerations. Since such a behavior is difficult to achieve in a college of independent supervisors, it is reasonable to suggest a unified regulatory and supervi-

sory agency in charge of all competing CCPs. The objective of the single CCP supervisor would be to limit the value-at-risk of the entire financial system, encompassing all CCPs in a single market model. Given the current institutional set-up in Europe, the single supervisor for the CCPs could be either ESMA, or the Single Supervisory Mechanism for banks (SSM), or a new institution that would be established from scratch.

In light of the important role of systemic risk in understanding the potential costs and benefits of CCPs, we argue in favor of the SSM as the single CCP supervisor. A sound estimation of margining standards requires comprehensive information about the major counterparties of the CCPs which are predominantly commercial and investment banks as well as broker-dealer institutions. As the SSM has already deep knowledge about all risks of these institutions, no double data collection efforts would be required to set up the single CCP supervisor.

#### Recovery and resolution regime of limited importance

European regulators have recently turned their attention to a recovery and resolution policy regarding CCPs. However, a simple copy-and-paste of the respective procedures in banking,

emphasizing the concept of bail-in and total loss absorbing capital, will most likely be insufficient for CCPs. A bail-in tool is restricted to loss events of rather limited size. A CCP, unlike a bank, is almost by construction too big and too interconnected to fail. The only feasible remedy in a CCP loss event will then require a government backup and/or a central bank life-line.

The larger the CCP, the more efficient its multilateral netting facilities, the more important is the credibility of a bailout guarantee by the domestic governments. In fact, the guarantee has to be issued by those states that are home to the clients of the CCP, not necessarily to the CCP itself. This point is of relevance, for example, in the current debate about the future location of a merged Deutsche Börse-London Stock Exchange entity. A consolidated CCP (or both CCPs if LCH.Clearnet and Eurex. Clearing remain separate businesses) run by the merged entity should be domiciled within the borders of the European Union, preferably the Eurozone, controlled by a single EU-wide supervisory agency.

*The full SAFE policy white paper is available at: [www.safe-frankfurt.de/ccp](http://www.safe-frankfurt.de/ccp)*

#### Selected Policy Center Publications

**Franke, G., Mosk, T. and E. Schnebel** (2016)  
 “Fair Retail Banking: How to Prevent Mis-selling by Banks”,  
 White Paper No. 39, SAFE Policy Center.

**Issing, O.** (2016)  
 “Central Banks – from Overburdening to Decline?”,  
 White Paper No. 42, SAFE Policy Center.

**Ludwig, A.** (2016)  
 “Das Deutsche Rentensystem: Thesen zur derzeitigen Diskussion um ‚Umkehr‘-Reformen”,  
 White Paper No. 40, SAFE Policy Center.

**Siekman, H.** (2016)  
 “Kurzkommentar zum Volksentscheid im Vereinigten Königreich am 23. Juni 2016”,  
 Policy Letter No. 53, SAFE Policy Center.

**Weichenrieder, A.** (2016)  
 “Panama & Co: Implikationen für die Steuerpolitik”,  
 Policy Letter No. 52, SAFE Policy Center.

## SAFE Summer Academy in Brussels



This year's SAFE Summer Academy, which took place in Brussels on 13 and 14 September, focused on the impact of regulation on market liquidity, including the consequences thereof on trading. A further topic was the question of whether or not the new EU bail-in regulation will work. Jan Pieter Krahen, Program Director of the SAFE Policy Center, welcomed participants and speakers from ten European member states, representing many of the institutions involved in the legislation and implementation of financial markets regulation: the European Commission, the European Parliament, European regulatory and supervisory institutions, national central banks as well as ministries of finance. The keynote address was given by Franklin Allen, Professor of Finance and Economics at the Imperial College London (photo). The SAFE Summer Academy provides a research-based training for European policymakers dealing with financial markets regulation. Participants are given an academically disciplined, fact- and evidence-based assessment of the impact of recently implemented reforms on (international) financial markets and their stability.

## Anneliese Maier Research Prize to Marti Subrahmanyam



*From left to right: Loriana Pelizzon, Marti G. Subrahmanyam, Johanna Wanka, Helmut Schwarz (President of the Humboldt Foundation)*

On 8 September, the Federal Minister of Education and Research, Johanna Wanka, handed over the Anneliese Maier Research Prizes – among others to Marti G. Subrahmanyam, Charles E. Merrill Professor of Finance, Economics and International Business at the Stern School of Business, New York University. Subrahmanyam had been nominated by the Research Center SAFE. The award of 250,000 euros will be used over a period of five years to finance research cooperation between Subrahmanyam and SAFE. The official host will be Loriana Pelizzon, SAFE Professor of Law and Finance.

## Nicola Fuchs-Schündeln awarded the Gossen Prize



Nicola Fuchs-Schündeln, Professor of Macroeconomics and Development at Goethe University Frankfurt's House of Finance and Principal Investigator at the Research Center SAFE, has been awarded the Gossen Prize 2016. The Gossen Prize, which is endowed with 10,000 euros, is awarded every year to a German speaking economist who has gained an international reputation for his or her research. Nicola Fuchs-Schündeln mainly investigates the behavior of private households with respect to consumption, savings and labor supply as well as the endogeneity of preferences. Her work has been published i. a. in the American Economic Review, in the Quarterly Journal of Economics and in Science. Since 2009, Fuchs-Schündeln holds a chair at Goethe University and also contributes to the Research Center SAFE. Before coming to Frankfurt she held positions at the universities of Harvard and Yale in the U.S.

## Helmut Gründl advises Federal Financial Supervisory Authority



Helmut Gründl, Managing Director of the International Center for Insurance Regulation at the House of Finance, has been appointed a member of the Insurance Advisory Council of the Federal Financial Supervisory Authority (BaFin) for a five year term. The Insurance Advisory Council addresses issues of insurance practice and provides advice to BaFin on the implementation and further development of supervisory law. Also, there are circumstances where the German Insurance Supervision Act (Versicherungsaufsichtsgesetz – VAG) provides that the Insurance Advisory Council must be consulted.

# Selected Publications

**Aldasoro, I. and E. Faia** (2016)

“Systemic Loops and Liquidity Regulation”,  
forthcoming in Journal of Financial Stability.

**Baghestanian, S., Gortner, P. and B. Massenot**  
(2016)

“Compensation Schemes, Liquidity Provision,  
and Asset Prices: An Experimental Analysis”,  
forthcoming in Experimental Economics.

**Baums, T.** (2016)

“Beiträge zum Recht der Unternehmensfinan-  
zierung”,  
T. Florstedt, J. Redenius-Hövermann, U. Segna,  
H.-G. Vogel (eds.), Mohr Siebeck.

**Eufinger, C. and A. Gill** (2016)

“Incentive-Based Capital Requirements”,  
forthcoming in Management Science.

**Gomber, P., Sagade, S., Theissen, E., Weber, M.  
and C. Westheide** (2016)

“Competition Between Equity Markets:  
A Review of the Consolidation Versus Frag-  
mentation Debate”,  
forthcoming in Journal of Economic Surveys.

**Höring, D., Gründl, H. and S. Schlütter** (2016)

“Impediment of Communication in Financial  
Institutions: Implications for the Risk Mana-  
gement Organization”,  
forthcoming in The Geneva Risk and Insurance  
Review.

**König, F.** (2016)

“Analyst Behavior: The Geography of Social  
Interaction”,  
Journal of Behavioral Finance, Vol. 17, No. 3,  
pp. 201-216.

**Kosfeld, M. and U. Schüwer** (2016)

“Add-On Pricing in Retail Financial Markets  
and the Fallacies of Consumer Education”,  
forthcoming in Review of Finance.

**Kraft, H., Seiferling, T. and F. Seifried** (2016)

“Optimal Consumption and Investment with  
Epstein-Zin Recursive Utility”,  
forthcoming in Finance and Stochastics.

**Quintana-Domeque, C. and J. Wohlfart** (2016)

“Relative Concerns for Consumption at the  
Top: An Intertemporal Analysis for the UK”,  
Journal of Economic Behavior & Organization,  
Vol. 129, pp. 172-194.

**Tasca, P., Aste, T., Pelizzon, L. and N. Perony**

(eds., 2016)

“Banking Beyond Banks and Money. A Guide to  
Banking Services in the Twenty-First Century”,  
Springer.

**Tröger, T. and T. Kelm** (2016)

“Kündigung von (Bau-)Sparverträgen im  
Niedrigzinsumfeld”,  
Neue Juristische Wochenschrift, Vol. 39/2016,  
pp. 2839-2844.

## Recent SAFE Working Papers

**Horneff, V., Maurer, R. and O. S. Mitchell** (2016)

“Putting the Pension Back in 401(k) Plans: Optimal  
versus Default Longevity Income Annuities”,  
SAFE Working Paper No. 150.

**Caporin, M., Kolokolov, A. and R. Renò** (2016)

“Systemic Co-Jumps”,  
SAFE Working Paper No. 149.

**Jakusch, S.** (2016)

“On the Applicability of Maximum Likelihood  
Methods: From Experimental to Financial Data”,  
SAFE Working Paper No. 148.

**Hackethal, A., Jakusch, S. and S. Meyer** (2016)

“Taring All Investors with the Same Brush?  
Evidence for Heterogeneity in Individual Prefe-  
rences from a Maximum Likelihood Approach”,  
SAFE Working Paper No. 147.

**Hackethal, A., Jakusch, S. and S. Meyer** (2016)

“Taming Models of Prospect Theory in the Wild?  
Estimation of Vlcek and Hens (2011)”,  
SAFE Working Paper No. 146.

**Abiry, R., Geppert, C. and A. Ludwig** (2016)

“Secular Stagnation? Growth, Asset Returns and  
Welfare in the Next Decades: First Results”,  
SAFE Working Paper No. 145.

**Bellia, M., Pelizzon, L., Subrahmanyam, M., Uno, J.  
and D. Yuferova** (2016)

“Low-Latency Trading and Price Discovery:  
Evidence from the Tokyo Stock Exchange in the  
Pre-Opening and Opening Periods”,  
SAFE Working Paper No. 144.

**Gomber, P., Sagade, S., Theissen, E., Weber, M.  
and C. Westheide** (2016)

“Spoilt for Choice: Order Routing Decisions in  
Fragmented Equity Markets”,  
SAFE Working Paper No. 143.

**Vellekoop, N.** (2016)

“The Impact of Long-Run Macroeconomic  
Experiences on Personality”,  
SAFE Working Paper No. 142.

**Haar, B.** (2016)

“Freedom of Contract and Financial Stability  
through the lens of the Legal Theory of Finance”,  
SAFE Working Paper No. 141.

**Gropp, R., Karapandza, R. and J. Opferkuch** (2016)

“The Forward-looking Disclosures of Corporate  
Managers: Theory and Evidence”,  
SAFE Working Paper No. 140.

# Financial Stability, Business Sentiment and Economic Growth in Europe: The Initiatives of the European Commission



**Mario Nava**  
Directorate-General  
for Financial Stability,  
Financial Services and  
Capital Markets Union,  
European Commission

Financial stability alone is a necessary, but unfortunately also not a sufficient condition for economic growth. We learned it the hard way: we need more. After the outburst of the financial crisis in 2008, private investors became pessimistic about future growth in Europe and cut their investments, which has since then depressed the European economy. With the Investment Plan for Europe, the European Commission is engaged in improving entrepreneurs' confidence and in supporting economic recovery. The European Commission is also committed to improving the way financial markets operate, so that they can better support the real economy. Building on the regained financial stability, strong and sustainable economic growth in Europe is possible with the support of an appropriate mix of economic policies that improve business sentiment and strengthen entrepreneurs' intention to undertake new challenges.

A stable and efficient financial system is a necessary condition for economic growth. When the financial crisis burst out in 2008, it obviously deeply reduced the trust in banks and financial markets. The bank regulatory reforms undertaken since then – and of which the banking union is the most well-known – have aimed at making banks safer. Banks were asked to increase their capital so that investors could trust and finance them once again. They were also asked to better control their risks, and incentives have been modified so that banks would reduce some of their most speculative activities and rather finance the real economy more.

In some countries important banks' bail-outs had to be undertaken with taxpayers' money. Because of financial and political constraints, bank bail-outs could be done once and only once. EU governments and the European Parliament then started the road towards introducing the bail-in principle, which limits the intervention of the State to exceptional cases, while bank shareholders and creditors are asked to be accountable for their investment choices and absorb losses.

The financial crisis has particularly hit EU investments. Annual investment in the EU has fallen by about 430 billion euros since its peak in 2007, with reductions concentrated in a few countries. At the moment, investment is estimated to remain approximately 230-370 billion euros per year below sustainable trends. The low level of investments is one of the main reasons why Europe's economic recovery remains weak.

The present Juncker Commission, after only three weeks in office, announced an Investment Plan for Europe aimed at reducing the EU investment gap that originated during the crisis and has widened since then. The successes obtained so far brought the European Commission to recently propose an extension of its investment plan from 2018 to 2020, with an increase in the available funds from 315 to 500 billion euros.

The Capital Markets Union Action Plan sets out a whole range of actions to increase funding options for Europe's businesses, to increase investment and to break down cross-border barriers to the free movement of capital. In this way, EU financial markets will ultimately become

deeper and more liquid and therefore a credible alternative for any investment.

In the last G20 meeting, the leaders of the most important economies in the world set economic recovery as their priority. They have committed themselves to using all economic policy tools at their disposal – of fiscal, monetary and structural nature – to achieve a strong, sustainable, balanced and inclusive economic growth.

A stronger and sustainable economic growth in Europe is clearly one of the objectives of the European Commission. The combination of mutually supporting initiatives put forward so far, while maintaining financial stability with the banking union, also aims at activating a sufficient volume of public-private investments with the Investment Plan for Europe and at improving through the Capital Markets Union the way in which financial markets can support entrepreneurs' confidence as well as their intention to increase investments.

*The views expressed in the text are the private views of the author and may not, under any circumstances, be interpreted as stating an official position of the European Commission.*

# Events

## November

- Tuesday, 1<sup>st</sup>  
2.15 – 3.45 pm  
**Frankfurt Macro Seminar – joint with SAFE**  
Speaker: Sarah Lein, University of Basel
- Tuesday, 1<sup>st</sup>  
4.15 – 5.30 pm  
**Finance Seminar – joint with SAFE**  
Speaker: Laura T. Starks, University of Texas at Austin
- Thursday, 3<sup>rd</sup>  
7.00 pm  
**ILF Evening Lecture**  
**Brexit: Very First Thoughts for the Financial Services Industry on Economy, Strategy and Law**  
Speaker: Mathias Hanten, Deloitte Legal
- Monday, 7<sup>th</sup>  
5.00 pm  
**EFL Jour Fixe**  
**New Aspects of Crowdfunding Success**  
Speaker: Jascha-Alexander Koch, E-Finance Lab
- Tuesday, 8<sup>th</sup> –  
Wednesday, 9<sup>th</sup>  
**ICIR Visitor Seminar**  
**Optimal Retirement Spending and Insurance – When Biological Age and Chronological Age Differ**  
Speaker: Moshe A. Milevsky, York University
- Tuesday, 15<sup>th</sup>  
2.15 – 3.45 pm  
**Frankfurt Macro Seminar – joint with SAFE**  
Speaker: Max Groneck, Stockholm School of Economics
- Tuesday, 15<sup>th</sup>  
4.15 – 5.30 pm  
**Finance Seminar – joint with SAFE**  
Speaker: Itzhak Ben-David, Ohio State University
- Wednesday, 16<sup>th</sup> –  
Thursday, 17<sup>th</sup>  
**ICIR-SAFE Research and Policy Workshop**  
**Systemic Risk in the Insurance Industry**

Thursday, 17<sup>th</sup>

**ICIR Frankfurter Vorträge zum Versicherungswesen**

**Outsourcing unter Solvency II – Auswirkungen auf Versicherungsunternehmen und deren Vertriebspartner**

Speaker: Bernd Fröhler, Ernst & Young

Tuesday, 22<sup>nd</sup>  
2.15 – 3.45 pm

**Frankfurt Macro Seminar – joint with SAFE**

Speaker: Claudio Michelacci, Center for Monetary and Financial Studies (CEMFI)

Tuesday, 22<sup>nd</sup>  
4.15 – 5.30 pm

**Finance Seminar – joint with SAFE**

Speaker: William Mann, UCLA Anderson

Tuesday, 29<sup>th</sup>  
2.15 – 3.45 pm

**Frankfurt Macro Seminar – joint with SAFE**

Speaker: Farzad Saidi, Stockholm School of Economics

## December

Thursday, 1<sup>st</sup>  
6.30 pm

**ILF Evening Lecture**  
**China-Strategie der Börse**

Speaker: Katrin Ehling, Deutsche Börse

Friday 2<sup>nd</sup> –  
Saturday, 21<sup>st</sup>  
Jan, 2017

**GBS Open Program**  
**Alternative Investments**

Speaker: Uwe Walz, Goethe University

Friday 2<sup>nd</sup> –  
Saturday, 21<sup>st</sup>  
Jan, 2017

**GBS Open Program**  
**Derivatives and Financial Engineering**

Speaker: Christian Schlag, Goethe University

Monday, 5<sup>th</sup>  
5.00 pm

**EFL Jour Fixe**  
**Impacts of IT Climate in Knowledge-Intense Organizations**

Speaker: Nico Wunderlich, E-Finance Lab

Tuesday, 6<sup>th</sup>  
2.15 – 3.45 pm

**Frankfurt Macro Seminar – joint with SAFE**

Speaker: Andreas Mueller, Columbia Business School

Tuesday, 6<sup>th</sup>  
4.15 – 5.30 pm

**Finance Seminar – joint with SAFE**

Speaker: Oliver Spalt, Tilburg University

Wednesday, 7<sup>th</sup>  
5.30 pm

**IMFS Distinguished Lecture**

Speaker: Valdis Dombrovskis, Vice President, EU Commission

Friday, 9<sup>th</sup>  
9.00 am –  
5.00 pm

**SAFE Microstructure Workshop**

Tuesday, 13<sup>th</sup>  
2.15 – 3.45 pm

**Frankfurt Macro Seminar – joint with SAFE**

Speaker: Lorenz Kueng, Northwestern University

Tuesday, 13<sup>th</sup>  
4.15 – 5.30 pm

**Finance Seminar – joint with SAFE**

Speaker: Samuel Lee, Santa-Clara University

Tuesday, 20<sup>th</sup>  
2.15 – 3.45 pm

**Frankfurt Macro Seminar – joint with SAFE**

Speaker: Dionissi Aliprantis, Cleveland Fed

## January

Monday, 9<sup>th</sup>  
5.00 pm

**EFL Jour Fixe**  
**Using Customer Metrics to Improve Credit Approval Decisions in Corporate Banking**

Speaker: Daniel Blaseg, E-Finance Lab

Tuesday, 17<sup>th</sup>  
2.15 – 3.45 pm

**Frankfurt Macro Seminar – joint with SAFE**

Speaker: Angie Andrikoyiannopoulou, London School of Economics

Tuesday, 24<sup>th</sup>  
2.15 – 3.45 pm

**Frankfurt Macro Seminar – joint with SAFE**

Speaker: Gernot Mueller, University of Tübingen

Tuesday, 31<sup>st</sup>  
4.15 – 5.30 pm

**Finance Seminar – joint with SAFE**

Speaker: Marta Szymanowska, Rotterdam School of Management



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