

The Impact of Monetary Policy Interventions on the Insurance Industry_4

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IMPRINT

Publisher:

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

Editors:

Dr. Muriel Büsser
Prof. Dr. Wolfgang König
Christopher Krämer
Laura Thomale

Contact:

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

Design:

Novensis Communication GmbH
Bad Homburg

3rd Edition

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Frankfurt am Main

Printed in Germany

About SAFE

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

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

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

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Editorial



Loriana Pelizzon

SAFE Program Director “Systemic Risk Lab” and Coordinator Gender Equality

Only about 20 percent of Europe’s leading economists are women; in the US, the proportion of female professors in economics is even lower at 15 percent, as the “Economist” reported in an interesting article last year. At SAFE, we have not managed to bring the share of women among our research staff above one fourth – although we have been trying very hard to do so since the start of SAFE in 2013. What makes this endeavor so difficult?

When looking at the start of a possible academic career, things still look very good: About half of the students who begin to study economics in Germany each year are female. This percentage does not shrink substantially when looking at graduates: At Goethe University Frankfurt’s Faculty of Economics and Business Administration 44% of all bachelor graduates and 46% of all master graduates are female. But when it comes to doctoral students, research assistants, post-docs and professors the share of women decreases rapidly.

It goes without saying that this is not a satisfactory situation. This holds true not only for women: A lack of diversity is harmful for every academic subject and is likely to slow down the intellectual development of entire fields. Male economists who work in less diverse work settings might not reach their full potential because they are not challenged by the entire spectrum of perspectives on a certain topic.

There seems to be a glass ceiling that makes women’s success more difficult to achieve. But what are the reasons for this? Obviously, the perspective of many years of uncertain and low-paid jobs in academia until you might get a small chance of a permanent position might frighten away more women than men. But is the explanation so simple? What about discrimination? There are theories that economics in particular is a very testosterone-driven field where women need a very thick skin to defend themselves. Studies imply that for example, unconscious bias makes women face tougher standards on scientific publications than men. If they publish together with a male colleague, many readers intuitively assume that they have done a minor part of the work.

This is a setting which cannot be changed within a few years. Since the foundation of SAFE we have tried our best to counteract gender prejudice and to empower each one of our researchers and staff to reconcile family with their career. We have implemented a variety of measures like a gender-sensitive personnel policy and a women’s network to continually increase the proportion of women in our research team – while, of course, sticking to the guiding principle of always selecting the most qualified candidate for an open position.

We seem to be on the right path: SAFE was recently awarded the TOTAL E-QUALITY certificate for exemplary action in terms of a human resource management aimed at providing equal opportunities. This is both motivation and obligation to continue our efforts and to pursue this path further. If you have any comment or suggestion for us on this topic, please write us a message to gender@safe-frankfurt.de.

Yours sincerely,
Loriana Pelizzon

The Impact of Monetary Policy Interventions on the Insurance Industry



Loriana Pelizzon
Goethe University & SAFE

Low inflation, ultra-low yields, and extremely low interest rates caused by unconventional monetary policies: For insurers, it was much easier in higher-yield periods. In this study, we analyze the effects of conventional and unconventional monetary policy interventions on insurers.

Since 2013, the European Central Bank (ECB) has been enforcing a series of conventional and unconventional monetary interventions, including Quantitative Easing (QE). The ECB aimed to contrast the economic stagnation affecting Europe, but its policies, in addition to their welcome stimulus of the economy, resulted in extremely low interest rates, exacerbating the problems arising from the low-yield environment.

For the insurance industry, this environment is becoming a severe threat in terms of solvency and the sustainability of their business models. Particularly affected are companies with a relevant outstanding portfolio of products entailing high guaranteed rates of return and profit participation features. The lack of sufficiently remunerable rated assets on the market sub-

stantially reduces the capability for (re)insurers to match the outstanding portfolio of guaranteed policies underwritten in high-yield years from a return and duration perspective. With the aim of assessing the impact of the conventional and unconventional expansionary monetary policy strategies on the insurance industry, we empirically measure the reactions of market performances of a panel of (re)insurers against the central banks' interventions.

Our approach is twofold. The first part of our analysis identifies the effect on (re)insurers, scrutinizing the reaction of stock prices to the policy actions of central banks. Initially, we elaborate on an event study based on a market model (Mackinlay, 1997) around the time of the last ECB QE announcement (22 January 2015). Here we use a sample of 166 (re)insurers, split into different subsamples according to size and geographical criteria, and compare this with the behavior of other market participants.

Subsequently, we extend the analysis from one event to a broader time-window, from 2004 until 2017, elaborating on the concept of monetary

policy surprise developed by Bernanke and Kuttner (2005) and Rogers et al. (2014). In order to identify the causal relationship of monetary policy interventions on (re)insurers we compare the reactions of stock returns to monetary policy announcement and non-announcement days in five sub-periods defined according to the economic cycles.

In the second part of the analysis, we identify the determinants at balance sheet level that drive the sensitivity of (re)insurers to the events thereof. To that aim, we build a set of indices based on balance sheet items, which identify the asset and liability structure of insurers, namely their investment behaviors and their product portfolio mix. We then use the indices thereof as explanatory variables for the sensitivity of the (re)insurers to monetary policy interventions in a logit regression.

Empirical evidences of the effect of QE on insurers

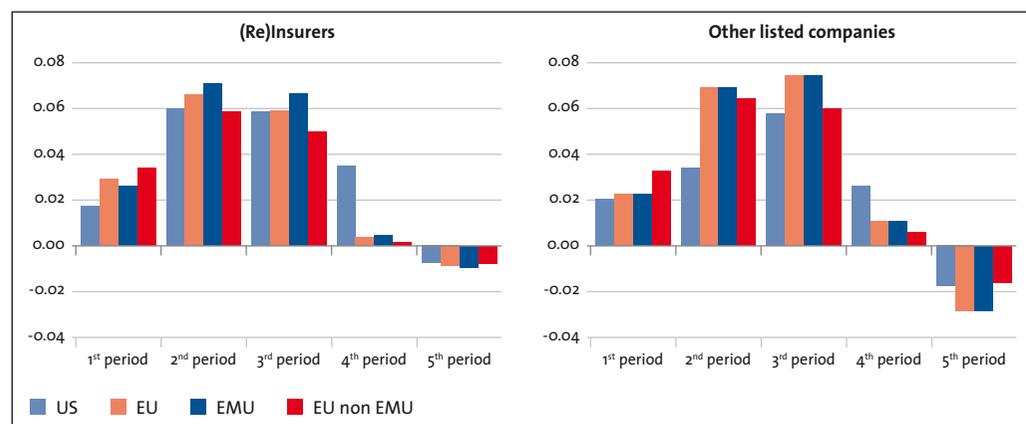
In the event study, we find that QE has a moderate negative effect on the insurance industry. Results are model driven however; as a matter of fact, the different specifications we tested

¹ The content of this study does not reflect the official opinion of EIOPA. Responsibility for the information and views expressed therein lies entirely with the authors.

show how the outcomes of the event study are strongly dependent on the observation period. Furthermore, we did not obtain statistically significant results for the subsamples. More robust results are obtained by applying the monetary policy surprise-based-model. We document how the effect of monetary policy interventions on interest rates on the announcement days and on the subsequent reactions of the markets in general and of (re)insurers in particular changes over time.

Our empirical evidence suggests that when monetary policy actions generate an immediate reduction in interest rates, the effect on stock returns is negative, whereas an increase in interest rates is positively received by the markets.

The impact on the stock market is larger during crisis periods than in tranquil periods and the effectiveness of the monetary policy actions tend to fade away after prolonged application and in an ultra-low-yield environment. This applies both to the ECB and FED actions with one distinction: FED interventions affect larger geographical areas than ECB ones do, with the latter having more concentrated but higher impacts. Monetary policy actions, when producing statistically significant results, have more limited results on (re)insurers than on other companies, particularly with respect to the ECB. This difference can be traced back to insurance balance sheet structure where the duration gap makes the contraction of the liabilities more pronounced than the one of the assets.



ECB coefficient over time: This figure graphically represents the coefficient of the monetary policy surprise explanatory variables. The coefficients in the 4th and 5th period are not significant for (re)insurers and other listed companies.

The long-term nature of business serves as rationale to explain the reduced impact on (re)insurers. Stock prices are defined by discounted future profits; therefore, the potential negative impacts of reduced interest rates on long-term obligations that characterize the business overcome the short-term benefits deriving from the mark-to-market valuation of the assets. This explanation is also in line with the results obtained at the EU country level, where jurisdictions traditionally exposed to long-term obligations are more affected than others.

The impact on (re)insurers was confirmed by the reactions of the CDS market. Our analysis shows how, during ECB monetary policy days when an instantaneous reduction of the interest rate is observed, the detrimental effect on the stock return is associated with a negative impact on CDS spreads.

The second part of our analysis indicates that, in line with the economic expectation, size and exposure to fixed income assets seem to drive the sensitivity of (re)insurers to monetary policy interventions. However, against our initial hypothesis based on the liability-driven nature of the insurance business, none of the liability-based indices provide statistically significant results. Our balance sheet analysis is limited by the frequency and granularity of the information

and does not provide a clear-cut explanation for the documented low effectiveness of the ECB and FED interventions in the last two periods of observation. Yet we believe that the evidence we gathered provides an initial valuable contribution to the literature on the analyses of monetary policy, enriching it with a specific focus on the insurance industry. Furthermore, the results may be of interest for policymakers, offering them a wider perspective on the impacts that monetary policy actions have on a specific sector.

References

Mackinlay, A. (1997), “Event studies in economics and finance”, *Journal of Economic Literature*, Vol. 35, pp. 13-39.

Bernanke, B. S. and K. Kuttner (2005), “What explains the stock market’s reaction to federal reserve policy?”, *The Geneva Papers on Risk and Insurance-Issues and Practice*, Vol. 60, pp. 1221-1257.

Rogers, J. H., Scotti, C. and J. H. Wright (2014), “Evaluating asset-market effects of unconventional monetary policy: A cross-country comparison”, *International Finance Discussion Papers*, number 1101.

This paper is available as SAFE Working Paper No. 204 at SSRN:

<https://ssrn.com/abstract=3167148>

Intended and Unintended Consequences of Government Credit Guarantee Programs



Vasso Ioannidou
Lancaster University & CEPR



Jose Liberti
Northwestern University



Thomas Mosk
SAFE



Jason Sturgess
Queen Mary University
of London

After the financial crisis of 2008, many countries either nationalized their financial institutions or provided guarantees to the banking system, including direct credit guarantee programs. This extension of credit guarantee schemes was supposed to be an important policy measure to prevent a credit crunch in the lending market for small and medium-sized enterprises in the aftermath of the crisis. In this study, we analyze effectiveness of these policies and their impact on banks' risk-taking behavior. We find that such programs have positive effects on access to credit. However, shifting risk away from lenders and borrowers towards the government provides incentives that result in unintended consequences, consistent with moral hazard.

The use of government credit guarantee schemes to facilitate access to credit by small and medium-sized enterprises (SMEs) is widespread in the European Union (EU) and other developed and emerging markets. Many of them have been introduced in reaction to the financial crisis of

2008, aiming to prevent a credit crunch in the lending market. These policies can be found in most EU countries, including Belgium, France, and Spain. Although these policies are regarded to be important to prevent a credit crunch in the SME lending market, empirical evidence on their effectiveness and impact on banks' risk-taking behavior remains sparse. In our study, we evaluate the degree to which direct credit guarantee programs help mitigate the real effects of financial downturns by alleviating credit constraints on creditworthy firms. Our test example is MKB Borgstellingskrediet, the Dutch credit guarantee program. It was created in 1915 and is one of the oldest economic support program policies in the Netherlands.

The objective of the program is to support Dutch SMEs with sufficient prospects with respect to profitability and continuity, but not enough collateral to get a bank loan. Ultimately, the program aims to alleviate credit crunch pressures on viable SMEs and support productive investment and employment. In this type of credit guarantee program, the government provides direct guarantees to banks for loans to a target group.

The characteristics of the Dutch guarantee program, along with changes to the scheme during the period of analysis, provide a unique setting for studying the impact of such policy measures on credit availability, bank behavior, and subsequent firm performance. Under the Dutch guarantee scheme, qualifying firms can apply for a government guarantee loan. The decision to evaluate and originate the guarantee loans remains with the bank. To mitigate moral hazard concerns, the bank cannot obtain a credit guarantee for the full amount of the loan. The maximum fraction of the loan that can be guaranteed by the government, and thus the willingness to lend by the bank, varies significantly across groups of firms and through time. This variation, combined with detailed loan application data from one of the largest Dutch banks, allows us to study the impact of such guarantee programs during the crisis period and to study any change in bank behavior.

Risks transferred to the government

The desirability and effectiveness of guarantees is often questioned because they create moral hazard for both the lender and borrower.

Credit guarantee programs increase banks' willingness to lend to the targeted group by transferring the credit risk of a loan from the firm and bank to the credit guarantee scheme and, ultimately, the government. In the absence of a credit guarantee, the risk of a secured loan is shared between the bank and the borrowing firm. In the presence of a direct credit guarantee, this risk is (partly or entirely) transferred to the government. This may generate incentives that undermine firms' prospects and the broader effectiveness of such programs. For example, when the risk of a loan is not borne by the bank that originates the loan, incentives

to screen and monitor borrowers may decrease significantly.

In our study we use proprietary internal data from a large commercial bank in the Netherlands, containing more than 31,000 credit applications of small businesses over the period 2008 to 2013. The bank is one of the top five commercial banks in the Netherlands and has a market share of more than 25 percent in the SME lending market. The data include detailed information, such as on loan applications, bank processes, outcomes, and the purpose of the loan. Most importantly, the credit application data

includes loan applications (and rejections) with guarantees and without credit guarantees. We supplement the bank micro-level data with micro data from the Central Bureau of Statistic (CBS) in the Netherlands for information about the entrepreneur and to construct financial outcome measures like turnover and profit.

Intended and unintended effects

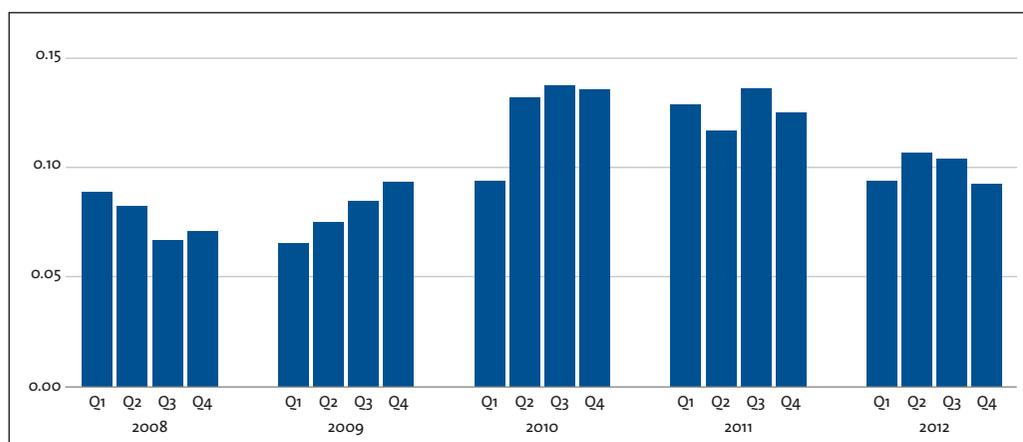
We find that the specifications of the guarantee program affect the number of loan applications under the guarantee scheme to a large degree. The figure plots the fraction of loan applications that include an application for a guarantee. It rises with the expansion of the program in March 2010 and falls with the contraction in January 2012. When we evaluate the impact of the reform on treated firms (those borrowers for whom the maximum guarantee increased to 80 percent in 2010) relative to the control group of firms, we find that, conditional on applying, the amount of loans of eligible firms increases after the guarantee expansion. These results are in line with the intention of the program to relax credit constraints.

But there are also unintended consequences: We find that the fraction of the loan guaranteed

increases, while the fraction of the loan collateralized by the borrower decreases for treatment borrowers. Strikingly, the coverage ratio (defined as the ratio of collateral value over total exposure) remains constant, which suggests a possible substitution effect whereby banks accept less inside collateral from firms and substitute it with government guarantees.

Moreover, the impact of the program on the ex-post performance of loans is striking. Our results show that the bank originates riskier loans in the treatment group, as measured by the ex-ante risk rating and ex-post default. This is consistent with the bank having lower incentives to screen and monitor loans ex-post. This result provides evidence that credit guarantee programs can have negative distortive effects on bank capital allocation, which casts doubt on their effectiveness. Policymakers should carefully consider both effects when designing such programs.

The paper has been published in Mayer, C. et al. (eds) (2018), "Finance and Investment: The European Case", available at: <https://global.oup.com/academic/product/finance-and-investment-the-european-case-9780198815822?cc=de&lang=en&>



Under the Dutch guarantee program: Number of loan applications as a fraction of total loans.

“Natural Disasters May Affect all Areas of the Economy”



Christian Schlag
Goethe University & SAFE

In this interview, Christian Schlag, Professor of Derivatives and Financial Engineering at Goethe University and Program Director of SAFE for “Financial Markets – Trading and Pricing”, talks about the economic effects of climate change. In addition to Goethe University, Schlag has taught at Vanderbilt University in Nashville and other universities internationally. His research interests include derivatives (like options and futures), asset pricing, and empirical capital market research.

You are concerned with the economic effects of climate change. How far is the research in this area?

There are several branches of economic research that deal with different aspects. One example is to study climate-driven migration, which is triggered by climate change because, e.g., certain farming sectors no longer provide sufficient harvest. This creates migration flows with pronounced economic effects. In our own research, my co-authors and I deal with even more basic economic issues. For example, there are negative productivity effects and, consequently, welfare losses due to climate change. Research is picking up now, not a least due to the fact that the problem has arrived in public consciousness.

Climate change also may have negative effects on the financial markets. What does that mean for investors?

First, there is the economic effect of falling productivity. Overall economic output decreases, and only this output can be distributed

to investors via financial markets in the long run. Second, there is research that deals with the question whether climate-related risks and climate-related behavior of companies influence the valuation of shares. It is very well possible that pressure from investors causes a change in the behavior of companies. Climate change could therefore have some positive impacts on companies via the capital markets. However, certain lines of business can hardly be made climate-neutral. This is the case, for example, in the energy sector. However, factors such as environmental and social issues are becoming more important. Many players in the investment industry have started scrutinizing firms’ behavior in these areas carefully.

Does the correlation between falling productivity and rising temperatures apply for all economies?

There is variance in terms of intensity, with

economies largely dominated by agriculture probably being affected most. Technologically developed countries have better opportunities to isolate their economies from climate shocks or to develop new strategies. The problem is that in order to achieve sustainable improvements, you have to start tackling the causes of the problem. In addition, as we show in our research, it is not just about the temperature increase in the context of “global warming”, but also about temperature volatility. The more the weather deviates from the “normal” cycles, the more negative the economic effects are.

“The more the weather deviates from the ‘normal’ cycles, the more negative the economic effects are.”

New technologies could reduce welfare losses or even increase welfare. How realistic is the positive scenario?

There are scenarios in our model (Donadelli, 2017b) in which welfare actually increases, depending on the speed and intensity of adaptation of an economy to changing climate

conditions. Overall, the trend with respect to the economic effects of climate change is unfortunately pointing in a negative direction in my opinion, unless rather dramatic actions are taken.

In your studies you argue that with temperature shocks, spending on research and development will decline. Does the state need to step in?

Spending for research and development is falling as standard technology becomes less productive and attractive. It would be desirable that innovations are made in areas that have not yet been heavily promoted. It becomes more difficult to find the social willingness for it. One problem is that external effects with negative environmental impacts are poorly distributed to the polluter. In some areas, we do not pay the prices that would be reasonable to cover the resulting environmental damage. This could speak for state action.

“We have definitely advanced considerably compared to ten years ago.”

If regulatory measures are adopted, adaptation in the manufacturing industry is usually rapid. This is shown by experience, for example in catalytic converters for cars. Better than regulation, however, would be intelligent, incentive-based solutions. These would have to provide incentives to behave optimally from self-calculus. That is better because not so much energy is invested in the circumventing regulations.

Is awareness strong enough in companies and governments?

We have definitely advanced considerably compared to ten years ago. Think of the so-called “Green Bonds”: these are bonds issued by companies that can present themselves as particularly environmentally conscious. Interestingly, even countries have also started issuing Green Bonds, e.g., France. Of course, this is at least in part related to marketing. But this fact nevertheless shows that conscious-

ness has grown. Of course, not all that glitters is gold. Nevertheless, things get moving.

How can companies prepare for climate change?

It depends on the respective industry. Reducing energy dependence often makes sense. Companies should also be aware that, for example, climate-induced natural disasters are factors that affect all areas of the economy, e.g., by deteriorating the capital base of insurers and reinsurers. These businesses consequently become more expensive, which is why certain economic activities are probably not pursued anymore due to excessive risk. This has the potential to undermine investment and thus growth.

Where do you see the most pressing questions for future research?

The cooperation of different disciplines is important. Natural scientists have a better understanding of climate change and related processes. Economists on the other hand are experts at investigating how scarce resources

should be optimally allocated for competing uses. The collaboration can prove very fertile, also with other disciplines such as the social sciences. The necessary measures must be implemented politically without scaring voters. Social and political acceptance is crucially important for change. The challenge will be to create sensible economic incentives for “good” climate-related behavior in as many areas as possible.

References

- Donadelli, M., Grüning, P., Jüppner, M. and R. Kizys** (2017a) “Global Temperature, R&D Expenditure, and Growth”, SAFE Working Paper No. 188.
- Donadelli, M., Jüppner, M., Riedel, M. and C. Schlag** (2017b) “Temperature Shocks and Welfare Costs”, *Journal of Economic Dynamics and Control*, Vol. 82, pp. 331-355.

The European Stress Test Design Needs more Consistency and Transparency



Rainer Haselmann
Goethe University & SAFE



Mark Wahrenburg
Goethe University & SAFE

The results of the 2018 EU-wide stress test are expected to be published in November. Analyzing the design, we find that the adverse scenario of the 2018 EU-wide stress test is more severe than for previous stress tests in terms of the assumed decline of the gross domestic product (GDP). At the same time it is less severe in terms of the banks' expected losses. However, it seems unlikely that the scenario actually constitutes the most plausible threat scenario for the EU economy. We also find that the heterogeneity of the banks' forecast models and the lack of transparency may cause inconsistencies. These weaknesses threaten the usefulness of the stress test to support market discipline among European banks.

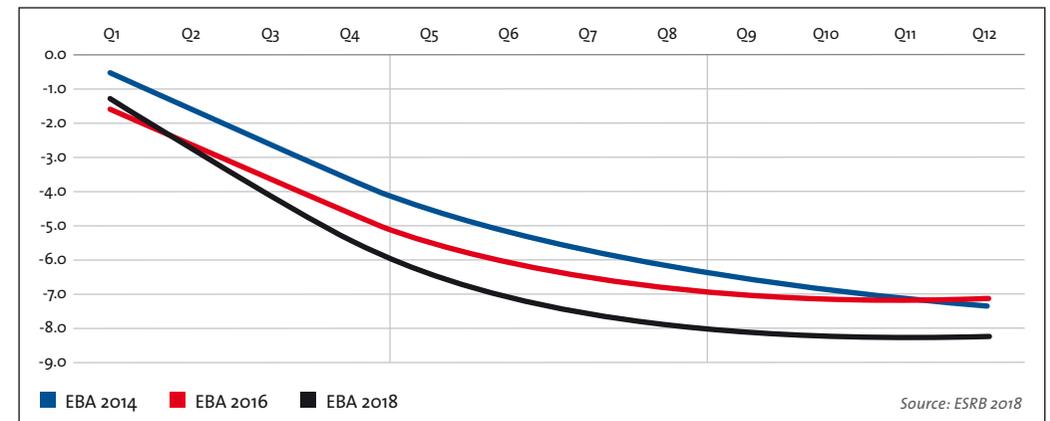
After the financial crisis in 2008, stress tests were introduced in order to re-establish public confidence in the banking sector. The 2018 EU-wide stress test, launched on 31 January by the European Banking Authority (EBA), is testing the reaction to a hypothetical macro-

economic scenario. Results are expected to be published by 2 November 2018. In order to provide a reliable forecast, the scenario and methodology need to be demanding and consistent. Is this the case for the 2018 stress test?

The adverse 2018 scenario

The adverse scenario of 2018 is determined by a shock outside of the EU that spills over into Europe via financial and trade channels. In aggregate, this scenario is the most severe compared to the previous tests in 2014 and

2014: The assumed deviation from the baseline EU growth rate is more than 8 percentage points in 2020, resulting in tight financial conditions. The consequences are asymmetric in the EU, apparently depending on the openness of the countries' economy, and thus the impact of the scenario depends on the banks' location. Therefore, the yet to be published "bank-by-bank" results will be difficult to compare among banks located in different member states because of the country-specific treatments.



EU real GDP deviation (in percent) from the baseline comparison between EBA exercises: The 2018 stress test implies with 8.3 % deviation from the baseline level the most severe scenario compared to the scenarios of 2014 and 2016.

Important stress test parameters are not openly communicated

Is this scenario plausible? While it is difficult to foresee what kind of future crises will emerge, it is questionable whether a foreign shock – most probably originating in the US – really constitutes the most relevant risk to the European banking sector. Given the high debt-to-GDP levels of several European countries and the political discussion about the possibility of members leaving the European Monetary Union, other adverse macro-financial scenarios emerging from within the EU may be more plausible.

In order to learn about the impact of the EBA scenario on banks' balance sheets, we forecast banks' loan losses, applying a new and promising methodology of Niepmann and Stebunovs (2018). The main assumption is that banks' internal forecast models have not been changed since the last stress test in 2016. Surprisingly, even though the 2018 scenario is the most severe in terms of GDP decline, we expect it to result in smaller credit losses compared to the 2016 scenario. One explanation is that the macroeconomic situation in the EU has improved between 2016 and 2018.

Most importantly, the unemployment rate is lower by about 2 percentage points. Another explanation is that the 2018 scenario tends to have less effect on those banks that were especially affected by the 2016 scenario.

Banks participating in the stress test determine their own risk parameters to calculate their implied capital adequacy situation under stressed conditions. However, benchmark figures for these risk parameters that constitute important guidance for the impact on loan losses expected by the EBA as well as changes in risk weighted assets were only communicated to participating banks by the EBA and not to the public. Given this lack of transparency, it is difficult to assess how severely the stress scenario will actually affect banks, which weakens the credibility of the EU-wide stress test exercise. A redesign of the stress test that focusses on the information requirements of market participants could improve the effectiveness of the stress test in supporting market discipline among European banks.

Internal inconsistencies

We have further uncovered weaknesses re-

garding the internal consistency of the 2018 scenario. Firstly, the stock price scenarios provided by the European Systemic Risk Board (ESRB) do not seem to be consistent with the stock price scenarios provided by the EBA/ECB in the market risk scenario. For example, for Malta, the ESRB forecasts larger losses than the EBA scenario: Malta experiences a decline of 21.5 percent (2018), 19.7 percent (2019), and 15.6 percent (2020) in comparison to a decline in the market risk scenario of only 9.6 percent. For Norway, the opposite is true: The ESRB forecasts stock market declines of 27.7 percent (2018), 25.1 percent (2019), and 19.7 percent (2020) in comparison with the EBA scenario which postulates a larger loss of 28.5 percent.

Secondly, the scenario implies both a severe global recession and a rather strong increase of long-term government bond yields in Europe. Both are highly unlikely to happen at the same time. More consistent with empirical evidence, the US stress test by the Federal Reserve assumes a decline rather than an increase of interest rates. The EU stress test seems to be driven by the assumption that a global increase in risk premia also drives up government bond

yields. This contrasts with empirical experience that an increase of risk aversion drives investors to “safe havens” and thus decreases the interest rates such as in Switzerland, the US, and Germany. A possible explanation for these discussed inconsistencies may be rooted in political negotiations between countries in the design phase of the stress test.

The 2018 stress test also introduces some methodological changes. Some requirements are strengthened, others loosened. The most important is the introduction of the International Financial Reporting Standard 9 (IFRS 9) which has a positive impact on the tests' severity in theory. However, the EU transitional arrangements allow banks to completely neutralize all IFRS 9 impacts. Given this, the arrangements may actually alleviate its severity.

References

Niepmann, F. and V. Stebunovs (2018), “Modeling Your Stress Away”, International Finance Discussion Papers 1232, Board of Governors of the Federal Reserve System.

The full text is available as SAFE White Paper No. 54: <http://safe-frankfurt.de/stress-test-2018>

Target Balances: A Proposal for Institutional Reform



Jan Pieter Krahen
Goethe University & SAFE

For years, there has been a debate about the Target system in the euro area. Critics warn that they are an incalculable risk and that in particular Germany degenerates into a kind of self-service store. In fact, the German balance at the end of July 2018 was over 900 billion euros in the black. In contrast, other euro countries are in the red by hundreds of billions of euros. However, simply eradicating Target balances would be counterproductive. Instead, institutional reform would be a way to settle the dispute, e.g. by carrying out all monetary transactions directly at the ECB level.

Organizing payments across borders within a currency area is a complex task. The Target system fulfills this purpose: it is an infrastructure offered by the system of European central banks since 1999 for the quick and smooth processing of international money transfers. The system has existed in its current form since 2007 (TARGET2).

Repeatedly, the Target system has been criticized because of excessive imbalances, especially in Germany. In fact, the Deutsche Bundesbank currently has a claim against the euro system for over 900 billion euros. Other countries owe the system hundreds of billions. Critics claim that these countries can get into as much debt as they wish via Target. The critics call for political intervention: The Target mechanism should impose a settlement of the balances. The question therefore is whether the Target balances really represent a risk factor by themselves.

Symptoms of economic shifts in the euro area

In the Target system, payments from one country's account holders to payees in other countries are pooled and routed to the ultimate beneficiary through the central bank of the recipient country. Daily surpluses or deficits arise on the

various central bank accounts. The balance accumulates net transfers from the interaction of many underlying transactions over several years, it can thus not be attributed to individual transactions. Therefore, a description of "the cause" of a Target balance is very difficult. Since the sum of the Target balances of all participating countries is zero, one can interpret long-term positive and negative balances as an indicator, or a symptom, of continued shifts in assets and value between countries. These can be investments in capital goods, trading of goods, tourism, capital flight or the by-product of monetary policy – be it conventional or unconventional – and last but not least the role of individual financial centers of the eurozone.

If the Target balances are symptoms of lasting economic shifts across regions, how useful is a limit on their level? An annual settlement by central banks with negative Target balances, using government securities as collateral, would just exchange one form of government debt for another. A sensible therapy would rather focus on the underlying economic forces that contributed to these interregional shifts and imbalances.

Nevertheless, the critics may have a point if it

comes to the extreme scenario of an exit from the currency union. While such a scenario is difficult to imagine in all its complexity, and unlikely to ever happen for that very reason, the current Target system may be offering rewards for mischievous leavers. Such a negative outcome would result if the leaver's central bank engages in money creation and subsequent purchase of foreign assets, thereby producing a Target balance which it may decide not to settle after the leave.

Luckily, such a seemingly free lunch can be avoided by a reform of the eurozone and a strengthening of its *modus operandi*: Running all open market activities through the ECB rather than national central banks will eliminate Target balances altogether. Alternatively, one could constantly rebalance each central bank's claim on a common open market account at the ECB, similar to the way regional balances are handled at the US Fedwire system. Once again, Target balances disappear. That way, a strengthening of the euro system's architecture may be the right answer to its major critics – and an improvement of the currency union's inner cohesion.

The full text is available as SAFE White Paper No. 56: <http://safe-frankfurt.de/target-balances>

Selected Publications

Dursun-de Neef, Ö. (2018)

“The Transmission of Bank Liquidity Shocks: Evidence from House Prices”,
forthcoming in the Review of Finance.

Goldmann, M. (2018)

“United in Diversity? The Relationship between Monetary Policy and Prudential Supervision in the Banking Union”,
European Constitutional Law Review,
Vol. 14, Issue 2, pp. 283-310.

Juraneck, S. and U. Walz (2018)

“Organizational Design, Competition, and Financial Exchanges”,
forthcoming in the Scandinavian Journal of Economics.

Kaas, L., Kocharkov, G. and E. Preugschat (2018)

“Wealth Inequality and Homeownership in Europe”,
forthcoming in the Annals of Economics and Statistics.

Koch, J.-A., Lausen, J. and M. Kohlhasse (2018)

“Towards Internalizing the Externalities of Overfunding – Introducing a ‘Tax’ on Crowdfunding Platforms”,
Proceedings of the 26th European Conference on Information Systems (ECIS 2018),
Portsmouth, UK.

Van den Bulte, C., Bayer, E., Skiera, B. and P. Schmitt (2018)

“How Customer Referral Programs Turn Social Capital into Economic Capital”,
Journal of Marketing Research, Vol. 55, Issue 1,
pp. 132-146.

Recent SAFE Working Papers

Hou, J. and M. Davoli (2018)

“Financial Literacy and Socialist Education: Lessons from the German Reunification”,
SAFE Working Paper No. 217.

Colonnello, S., Curatola, G. and A. Gioffré (2018)

“Pricing Sin Stocks: Ethical Preference vs. Risk Aversion”,
SAFE Working Paper No. 216.

Huszar, Z. R. and Z. Simon (2018)

“The Pricing Implications of the Oligopolistic Securities Lending Market: A Beneficial Owner Perspective”,
SAFE Working Paper No. 215.

Ibrocevic, E. and M. Thiemann (2018)

“All Economic Ideas are Equal, but Some are more Equal than Others: A Differentiated Perspective on Macroprudential Ideas and Their Implementation”,
SAFE Working Paper No. 214.

Gugler, K., Weichselbaumer, M. and C. Zulehner (2018)

“Effects of Government Spending on Employment: Evidence from Winners and Runners-Up in Procurement Auctions”,
SAFE Working Paper No. 213.

Hesse, H. (2018)

“Incentive Effects from Write-down CoCo Bonds: An Empirical Analysis”,
SAFE Working Paper No. 212.

Mosk, T. C. (2018)

“Bargaining with a Bank”,
SAFE Working Paper No. 211.

Schlag, C., Shaliastovich, I., Thimme, J. and D. Huang (2018)

“Volatility-of-Volatility Risk”,
SAFE Working Paper No. 210.

The SAFE Working Papers can be downloaded at <http://safe-frankfurt.de/working-papers>

News

The Way Forward for Deutsche Börse



Theodor Weimer, the CEO of Deutsche Börse, spoke at a SAFE Policy Lecture in July about the strategies of stock exchanges worldwide, the orientation of Deutsche Börse, and the

role of regulation. He stated how important growth for stock exchanges like Deutsche Börse is: “Those who do not grow will mercilessly be sorted out,” he said. Weimer sets himself the goal of steadily developing the company’s business model with medium and small acquisitions. His strategy is to focus on information technology, post-trade, and data trade. The subsidiary Clearstream is responsible for the safekeeping, management and accounting of assets after the purchase. However, the post-trade limits the “firepower” of Deutsche Börse for acquisitions in order to maintain the important “AA rating” not to fall behind the competition. Furthermore, Weimer said that the regulation of the stock exchanges is not just a burden. Instead, it can help develop new business areas. That is for example the case by assuming the data reporting from financial players to the supervisory authorities, as Weimer pointed out.



Friedrich von Metzler awarded with Honorary Professorship of the State of Hessen

Friedrich von Metzler has received an honorary professorship by the State of Hessen. The prize which awards outstanding contributions to science and the arts was presented by Hessen’s Minister of Science Boris Rhein at the House of Finance – which Metzler has a close relationship to: The Guest Professorship for International Finance, donated by Bankhaus Metzler to Goethe University in 1992, was one of the cornerstones in the development of the research focus on finance in Frankfurt – which later led to the foundation of the House of Finance. On the occasion of the University’s centennial in 2014, the Bankhaus Metzler also donated a Visiting Professorship for Financial History.

More Integration in the European Banking Supervision



For Pentti Hakkarainen, Member of the Supervisory Board of the Single Supervisory Mechanism (SSM) and representing the European Central Bank in the authority, it is clear that the European Banking Union needs further consolidation. At a SAFE Policy Lecture in June he said that key objectives of the European Banking Supervision are financial stability and further financial integration for a supervisory level playing field for banks. Therefore, the risks need to be identified and assessed and a timely and tough intervention is crucial, he pointed out. Hakkarainen also said that the supervisory framework and the methodology should apply in all participating countries. He pointed out that the European Deposit Insurance Scheme (EDIS) would complete the banking union: “It will help share risks more efficiently across the euro area, after a parallel risk reduction.” He is convinced that once the banking union is complete, the euro area would become even more of a single jurisdiction. “This will make it easier for banks to do business across borders and for the sector to consolidate,” Hakkarainen said.

The ECB Has Suffered Serious Damage in Recent Years



In Ashoka Mody’s view, the current problems in the euro area did not happen by accident. Rather, they are the result of a historical process, Mody said at a SAFE Policy Lecture in June. The European Central Bank (ECB) plays an important role and, as Mody sees it, has not been very successful in the last years. “In my view, the ECB has lost credibility in successfully fighting recessions and deflation,” said Mody, mentioning for example the late decision on Quantitative Easing (QE). Mody, who is Visiting Professor at Princeton University’s Woodrow Wilson School and former head of missions of the International Monetary Fund, also commented on the ECB’s QE-program, which was announced to end this year. The purchases have the goal to reach price stability and an inflation rate of below, but close to, 2 percent. Mody assessed that both, the ending and the extension of the buying program, would have negative impacts: Stopping the program would devalue the euro and the interest rate would potentially rise which could lead to financial instability. If the ECB continues the program, it would risk high losses, Mody concluded.

Events

September

- 18 September
5:30 pm
CFS Colloquium
Speaker: James v. Moltke, Deutsche Bank
- 19 September
12.00 – 1.15 pm
Frankfurt Macro Seminar – Joint with Deutsche Bundesbank and SAFE
Speaker: Elena Carletti, Bocconi University
- 20 September
9.00 am
**CFS Conference
Fintech-Revolution**
- 25 September
**SAFE Workshop
5th SAFE Asset Pricing Workshop**
- 26 September
**SAFE Panel Discussion
Praxis, Aufsicht + Wissenschaft im Dialog:
Praxiserfahrungen der Abwicklungsplanung**

October

- 1 October
**EFL Jour Fixe
ACTUS – Curate IT-integrated financial
contract types**
Speaker: Wolfgang Breyman, Zürcher Hochschule für Angewandte Wissenschaften
- 16 October
2.15 – 3.45 pm
Frankfurt Macro Seminar – Joint with SAFE
Speaker: Akos Valentinyi, The University of Manchester
- 16 October
4.15 – 5.30 pm
Finance Seminar – Joint with SAFE
Speaker: Anjan Thakor, Olin School of Business, Washington University in St. Louis
- 17 October
5:30 pm
**ICIR Policy Event
Climate Risk and Sustainable Finance in Europe:
The Role of Insurance**
- 23 October
2.15 – 3.45 pm
Frankfurt Macro Seminar – Joint with SAFE
Speaker: Pietro Garibaldi, University of Torino

25 October
9.00 am

**CFS Conference
Network-Summit**

29 October
5:30 pm

**CFS / IBF Lecture
What do We Know About Capital Flows?
150 Years of Data and Policy**
Speaker: Rui Pedro Ferreira Da Costa Esteves,
The Graduate Institute Geneva

29 – 30 October

**SAFE Workshop
3rd Household Finance Workshop**

30 October
2.15 – 3.45 pm

Frankfurt Macro Seminar – Joint with SAFE
Speaker: Serdar Ozkan, University of Toronto

November

1 November

**Center of Excellence
“Principles of Law and Finance”
Inauguration Event**

5 November

**EFL Jour Fixe
Liquidity Provider Incentives in Fragmented
Securities Markets**
Speaker: Jens Lausen, E-Finance Lab

5 – 6 November

**Joint Deutsche Bundesbank, SAFE, DIW, IWH
Research Conference
Financial Cycles and Regulation**

6 November
2.15 – 3.45 pm

Frankfurt Macro Seminar – Joint with SAFE
Speaker: Olga Gorbachev,
University of Delaware, Newark

13 November
2.15 – 3.45 pm

Frankfurt Macro Seminar – Joint with SAFE
Speaker: Dominik Sachs, University of Munich

15 November
6.00 pm

**ICIR Policy Event
Insurance Market and Regulatory Develop-
ments in the Western Balkan Countries –
Challenges and Perspectives**
Speaker: Klime Poposki, Council of Experts of
the Insurance Supervision Agency,
Republic of Macedonia

16 November
9.00 am

**CFS Workshop
8th Bundesbank-CFS-ECB Workshop on Macro
and Finance**

21 November
2.15 – 3.45 pm

Frankfurt Macro Seminar – Joint with SAFE
Speaker: Marco Pagano, Center for Studies in
Economics and Finance Napoli, Italy

22 November

**ILF Conference
Annual Conference on the Banking Union**

23 – 24 November

**ILF Conference
ECLIX – Das Wirtschaftsstrafverfahren –
zwischen Ökonomie, Ethik und Prozessmaximen**

27 November
2.15 – 3.45 pm

Frankfurt Macro Seminar – Joint with SAFE
Speaker: Kenza Benhima, Lausanne University

28 – 29 November

**ICIR Workshop
Frankfurt Insurance Research Workshop 2018**
Speaker: Helmut Gründl, Goethe University

December

3 December

**EFL Jour Fixe
Distributed Ledger Systems for Micropayments
in IoT Environments**
Speaker: Amr Rizk, E-Finance Lab

4 December
2.15 – 3.45 pm

Frankfurt Macro Seminar – Joint with SAFE
Speaker: Stefania Albanesi,
University of Pittsburgh

13 December

**SAFE Conference
Sustainable Architecture for Finance –
Where Are We Now and Where Are We Going?**

14 December

**SAFE Conference
6th Frankfurt Conference on Financial Market
Policy**

CFS Center for Financial Studies
DIW Deutsches Institut für
Wirtschaftsforschung Berlin

EFL E-Finance Lab Frankfurt am Main
IBF Institut für Bank- und Finanzgeschichte
ICIR International Center for Insurance Regulation

ILF Institute for Law and Finance
IWH Institut für Wirtschaftsforschung Halle

Please note that for some events registration is compulsory.



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