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## Article

# What We Can Learn from the Introduction of Blanket Deposit Guarantees in Germany 2008 about the Benefits of EDIS

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## What We Can Learn from the Introduction of Blanket Deposit Guarantees in Germany 2008 about the Benefits of EDIS<sup>2</sup>



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### INTRODUCTION

The euro area was severely affected by the global financial crisis. But while many other regions resolved the fallout quickly and soon recovered, in the euro area the crisis repercussions ultimately culminated in the sovereign debt crisis, bringing about a double dip in economic growth. This particularity of the euro area is largely due to what is now known as the “doom loop”: the mutual reinforcement of a domestic banking crisis and a sovereign debt crisis. Expectations of a costly government bailout of individual financial institutions and of the domestic deposit insurance systems raised worries in some member countries about the sovereign’s solvency and led to soaring interest rates on domestic government bonds. The associated drop in the value of domestic sovereign bonds in banks’ portfolios, along with elevated concerns about regulatory forbearance by domestic banking supervisors to avoid costly bailouts, further aggravated the banking crisis and led to a more severe sovereign debt crisis. This doom loop is particularly acute in the euro area, as the common monetary policy cannot help ease the sovereign debt crisis of individual member countries.

The European Council and the European Commission identified this shortcoming in the construction of the European Monetary Union and initiated the European banking union to increase the resilience of the euro area banking sector and to mitigate the doom loop. The European banking union consists of three pillars: the Single Resolution Mechanism (SRM), the Single Supervisory Mechanism (SSM), and the European Deposit Insurance Scheme (EDIS). The SRM and EDIS are measures to foster risk-sharing of banking crises between the member states. The SRM implements a common resolution framework for troubled banks that can draw on a fund financed by euro area banks, lessening the need for government bailouts, while EDIS establishes a common deposit insurance scheme. This system is to be funded by risk-based contributions from euro area banks and backed by the European Social Fund. The SSM is intended to establish a level playing field in regulation and supervision and prevent

regulatory forbearance, or at least safeguard its consistent application across countries. It ensures that the same rulebook applies when supervising both the large, systemically relevant euro area banks, which are directly monitored by the SSM, and the other euro area banks, which are monitored by the SSM only indirectly.

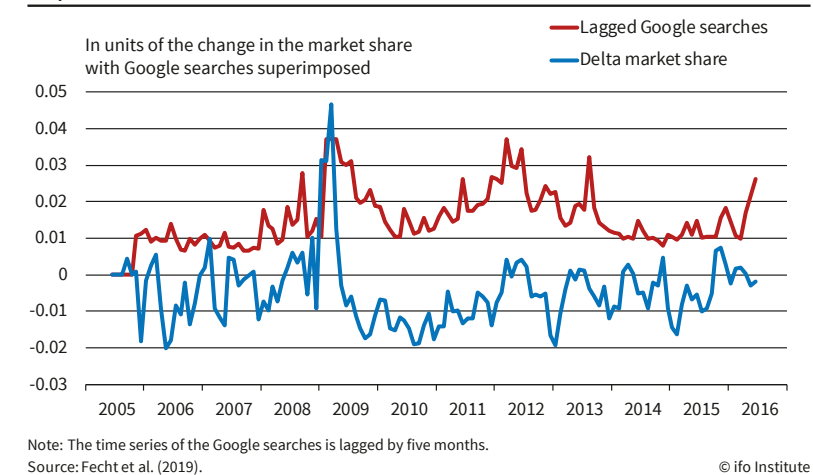
While the SSM and the SRM took effect in 2014, EDIS has not yet been launched. There are concerns that EDIS could aggravate various forms of moral hazard and risk-shifting, and could introduce unintended cross-subsidies across member states or their respective banking sectors. It is widely established that a deposit insurance scheme undermines market discipline and potentially leads to excessive risk-taking (see, for instance, Calomiris and Jaremski 2016; Lambert et al. 2014). However, in 2010, Art. 7 (1a) of Directive 94/19/EC imposed minimum requirements on national deposit insurance schemes for all EU member states, indicating a consensus that member countries considered the risk-shifting subordinate to the stabilizing role a deposit insurance scheme plays in banking crises. The risk-sharing implemented through EDIS only increases the credibility of the deposit insurance scheme in countries with a heavily indebted sovereign. To what extent this leads to an unwanted deterioration of market discipline for banks in those countries seems questionable. While Anginer et al. (2014) find that deposit insurance fosters excessive risk-taking among banks, particularly in countries with weak banking regulation and supervision, the SSM ensures the same high regulatory and supervisory standards in all member countries.

The single rulebook applied by the SSM also addresses potential moral hazard for national banking supervisors. This lessens the risk that these supervisors might be excessively forbearing to domestic banks as the costs of a banking failure are no longer borne entirely domestically but rather covered by EDIS or the SRM.

The harmonized deposit insurance schemes in the euro area take a common approach to risk-based contributions from the banks they cover. EDIS will also charge risk-based fees, most likely following the same approach. This reduces incentives for banks’ risk-taking and for potentially excessive regulatory forbearance by national supervisors. Furthermore, since risk weights under EDIS will be benchmarked against the average bank covered in the insurance scheme, it also largely eliminates cross-subsidies across member states. Carmassi et al. (2018) show that the larger ex ante contributions to a joint deposit insurance scheme paid by banks in countries with a more fragile banking system largely offset (under reasonable assumptions) the higher costs to EDIS of covering those banks’ deposits in a crisis. A sufficient risk-sensitivity of contributions should also ensure that most legacy risks suspected in some countries’ bank balance sheets do not lead to a cross-subsidy. This is of course true only for

Figure 1

Aggregate Correlation: The Market Share Variable Against Google Searches for 'Deposit Insurance'



those assets that affect the risk-based contributions. Sovereign exposures are neither considered risky with regards to contributions to EDIS nor do they add to banks’ risk-weighted assets. As frequently pointed out by Bundesbank president Jens Weidmann, this leads to cross-subsidies across member countries in EDIS, potentially inducing banks to actually increase rather than decrease their holdings of risky domestic sovereign debt (see, for instance, Weidmann 2018).

But apart from these concerns about preconditions and rules governing EDIS, which will hopefully be resolved soon, a fundamental question remains: Did depositors in crisis countries withdraw their deposits from domestic banks because they feared that their heavily indebted government would not be able to back the domestic deposit insurance? Or did depositors in those countries not withdraw their money because they were worried about a break-up of the euro and they wanted to avoid the redenomination risk of their euro deposits? Obviously, answering these questions is essential, because if only the first can be confirmed, there would be a rationale for EDIS in preventing similar crises in the future. If depositors withdrew solely because of break-up expectations, EDIS would be of little help.

In Fecht et al. (2019), we use a perfect empirical setting that allows us to assess exactly this question: whether—in absence of any redenomination risk—heterogeneity in government backing of deposit insurance schemes induces depositors to reallocate their deposits when fears about bank defaults mount.

### A UNIQUE EMPIRICAL SETUP

Germany’s banking system is unique. It is composed of three tiers: private banks, cooperative banks, and public savings banks. Whereas private banks and cooperative banks are well-known also in other countries, savings banks (“Sparkassen”) in their current form are

unique to the German financial system. The key difference from the other two tiers is that savings banks are partially publicly owned by the respective municipality, and therefore regarded by depositors as quasi government-guaranteed. Both savings and cooperative banks are spread across the country and offer financial services to small and medium-sized firms and retail investors. They are active only in their respective region or city and follow a “regional principle,” which means they do not compete for customers outside their home regions. As a consequence, savings banks

and cooperative banks cater to the same type of customers and compete for customers purely on the local level. However, deposits at cooperative banks are guaranteed only by the joint deposit insurance of the cooperative banking association, while deposits at savings banks are ultimately not only guaranteed by the respective savings bank association, but also enjoy an implicit government guarantee. In Fecht et al. (2019), we use these particularities of the German banking system to study the effect of increased depositor fears on the market share and deposit flows between cooperative banks and savings banks.

With the worsening Irish banking crisis, the collapse of Lehman Brothers on September 15, 2008, and growing rumors about a German HypoRealEstate insolvency, German depositors became concerned about their deposits. In response, on October 5, 2008, German Chancellor Angela Merkel and German Minister of Finance Peer Steinbrück announced a blanket government guarantee for all deposits held with German banks. This introduced a homogenous government backing of deposits in both savings banks and cooperative banks. As we argue in Fecht et al. (2019), this setup lends itself to the study—at both a cross-sectional and an intertemporal level—of whether, in a period of heightened concerns about bank defaults, depositors shift their money between cooperative banks and savings banks only because of a heterogeneous backing of the deposit insurance scheme.

### A NOVEL APPROACH TO MEASURING DEPOSITORS’ EXPECTATIONS

To study whether a potential shift of deposits from the quasi-private cooperative banks to the publicly owned savings banks is due to increased fears of a bank run by depositors in a particular region, in Fecht et al. (2019) we use a novel empirical indicator to capture those depositors’ expectations at a high frequency. Specifi-

<sup>1</sup> The views expressed in this paper are those of the authors and do not necessarily represent those of the Deutsche Bundesbank or the Eurosystem.

<sup>2</sup> This article is based on Fecht, F., S. Thum and P. Weber (2019), “Fear, deposit insurance schemes, and deposit reallocation in the German banking system”, Bundesbank Discussion Paper No. 12/2019.

cally, we use Google searches for terms like “deposit insurance” that are available on a weekly basis from Google Trends. An increase in this measure suggests that people are more concerned about losing their money due to a bank run. We then compare this data to statistics from the German Bundesbank’s monetary financial institutions (MFIs) balance sheets (to obtain information at the bank level about German depositors’ outstanding overnight deposits) and to the Bundesbank’s MFI interest rate statistics (for information about interest paid on those deposits). The subsequent analysis focuses only on overnight deposits, since these are immediately transferable, and on the “deposit insurance” search string for the fear indicator constructed from Google Trends.

### ARE INCREASED DEPOSITOR FEARS DRIVING DEPOSIT OUTFLOWS FROM PRIVATE BANKS?

In the first step of the analysis in Fecht et al. (2019), we compare the relative market share in the overnight deposits market of savings banks to cooperative banks, and assess whether a jump in Google searches for “deposit insurance” signals an increase in customers who transfer money from cooperative banks to savings banks. We also control for the fact that gains in market share may be due to a higher interest rate paid by one of the two banking sectors.

Figure 1 shows the ratio of the total volume of overnight deposits at savings banks to the total volume of overnight deposits at cooperative banks (blue line) as well as to the winsorized Google searches for “deposit insurance” with a five-month lag (red line). There is a significant correlation between savings banks’ gain in relative market share and an increase in this “fear” indicator. Applying a vector autoregression (VAR) model with the three key variables<sup>3</sup>, we obtain in Fecht et al. (2019) the impulse response functions depicted in Figure 2. It further supports the visual evidence in Figure 1, namely that a spike in Google searches (i.e., an increased level of fear) leads to an increase in the market share of public banks (bottom graph in Figure 2). As is evident from the impulse-response functions, higher anxiety among depositors is also associated with a lower interest rate margin. This could imply that savings banks are lowering their interest rates due to the increased inflow of deposits from anxious investors from cooperative banks. We also show the results for a bivariate Granger causality analysis and reject the null hypothesis that Google searches Granger-cause the market share measure but not the other way around. This implies that there is a unidirectional causal relationship between the Google search time series and the market share measure, adding further evidence that savings

banks’ market share gains are driven by overnight depositors’ anxiety.

### DEPOSIT GUARANTEES AS A MEANS FOR STOPPING DEPOSIT SHIFTS

In the second step of our analysis, in Fecht et al. (2019) we construct a panel representing six different states (“Länder”) within Germany. With it, we investigate whether an increase in our fear indicator in a specific region leads to a gain in the market share of savings banks relative to cooperative banks in that same region. More importantly, using this setup, we are able to analyze the impact of the government guarantee by running a difference-in-difference analysis while accounting for crossregional heterogeneity in depositor worries.

As laid out in detail in Fecht et al. (2019), we find a highly significant and positive effect of Google searches on the deposit shifts from private to public banks before the guarantee in October 2008. The effect is also economically strong: for example, when the fear indicator reached its highest point for the state of Rhineland-Palatinate, the model predicted a 3.5 percentage point gain in market share for savings banks. Thus, for the time period before the government guarantee, a rise in depositor fears led to a significant reallocation of deposits to the public part of the banking system.

However, as we show in Fecht et al. (2019), after the government introduced a guarantee for deposits at all banks in Germany on October 5, 2008, a higher level of fear no longer led to any significant deposit shifts from the cooperative banking sector to the public banking sector. Thus, we can conclude that the introduction of the blanket guarantee by the German government stopped depositors from shifting their overnight deposits from cooperative banks to public banks. We even found a statistically significant effect suggesting that depositors actually moved some deposits back from public banks to private banks after the introduction of the guarantee, although the net effect is economically quite small.

### IDENTIFYING EFFECTS OF GUARANTEES ON DEPOSIT FLOWS

In the final analysis in Fecht et al. (2019), we provide an additional perspective: Using data on individual banks, we are able to model the deposit flows for each savings bank and cooperative bank individually, accounting for various confounding factors at the bank level that we could not account for in the market share analysis at the state level. These factors include—next to the interest rate paid by these banks on overnight deposits—the bank’s equity ratio, its dependence on capital market funding, and some liquidity ratios derived from its balance sheet. In addition, the market share measure used in the previous analysis suffered from being agnostic about the possible in- and outflows of deposits from

banking groups other than cooperative banks and savings banks. Looking directly at the bank level mitigates this issue.

Results reported in Fecht et al. (2019) show that prior to the introduction of the government guarantee, an increased level of fear (as measured by the Google searches in each state) leads to a significant decline in the volume of overnight deposits at cooperative banks, while the volume of deposits at savings banks remained largely unchanged. After October 5, 2008, a higher level of anxiety among depositors did not lead to any significant in- or outflows to banks in either of the two sectors. Thus, again—but using a different perspective—the introduction of a blanket guarantee allayed the fears of depositors across the banking system.

In addition to this key finding, our results also show that the government guarantee had another significant effect on the banking system: before October 5, 2008, cooperative banks were not able to attract significant additional deposit inflows by increasing the interest rate on overnight deposits, whereas savings banks were successful with the same method. However, the guarantee leveled the playing field in the banking system: after October 2008, deposits at cooperative banks increased significantly when interest rates rose, and the interest rate sensitivity of deposit flows at cooperative banks is not statistically different from that at savings banks.

### CONCLUSION

Taking the findings from Fecht et al. (2019) together, we can conclude that the announcement of the government backing of deposits across the German banking system in October 2008 stopped the fear-driven with-

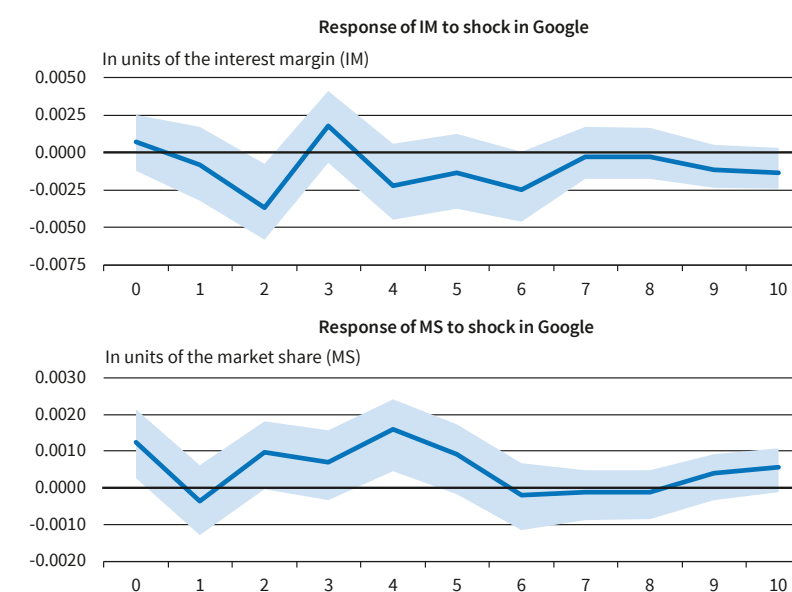
drawal of deposits from cooperative banks and their reallocation to savings banks, which had been observed prior to that date. This suggests that even in the absence of any redenomination risks, heterogeneity in the backing and credibility of deposit insurance schemes leads to a reallocation of deposits among different banking sectors with potentially destabilizing effects. There is clearly a role for EDIS to play in mitigating this effect.

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Figure 2

#### Impulse Response Functions (IRFs) for the Search Term 'Deposit Insurance'



Note: The figure displays a 95% confidence interval.  
Source: Fecht et al. (2019).

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<sup>3</sup> Where *Google* is the relative share of the search volume for the search term “deposit insurance,” *Market Share (MS)* is the market share of savings banks relative to cooperative banks, and *Interest Margin (IM)* is the overnight interest rate paid by savings banks minus the overnight interest rate paid by cooperative banks.