Credit line runs and bank risk management: evidence from the disclosure of stress test results

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Stress testing of banks has become a key element of the bank supervisory toolkit. Yet, the benefits and costs of publicly disclosing stress test results remain only partially understood. By providing valuable information to all market participants, publishing individual stress test results can reduce uncertainty and improve market functioning. However, their public disclosure can also have negative financial consequences on the banks that perform poorly in such exercises (e. g. worsening their funding conditions and limiting their capacity to perform intermediation functions), potentially beyond what is justified by fundamentals if a run dynamic is triggered. Thus, a comprehensive understanding of the involved benefits and costs is central for designing regulatory stress tests and potential complementary measures.

In this work, we firstly uncover a new cost of publicly disclosing individual stress test results in the form of credit line runs. In particular, we find that, following the publication of individual stress test results, firms run on credit lines granted by banks with poor performance in the test.

Our analysis focuses on Spanish banks and firms during the implementation of the EBA 2011 stress test. In particular, we examine whether, after the announcement of the results (July 15, 2011), firms precautionarily drew down credit lines out of concern that banks facing a negative information shock (stress test underperformance) may tighten future credit access. Answering this question requires us to control for firm liquidity demand, which we achieve by adding firm fixed effects in our regressions, following Khwaja and Mian (2008). Then, using a difference-in-differences approach, we analyse whether a firm uses differently its credit lines in response to the news about banks' performance in the stress test.

Additionally, we examine banks' mitigating actions before (and after) the results became public. In particular, banks that can potentially face extraordinary drawdowns will prefer to save on capital and liquidity buffers by tightening their lending standards. Thus, we explore whether worse-performing banks were more likely to not renew expiring lines or reduce their available funds. In addition, we analyse the effect on term credit (where the entire amount of funds is granted up front, as opposed to credit lines where funds are drawn down as needed) to firms that did not have credit lines, and examine whether worse-performing banks with more significant credit line balances cut term loans more often.

We find evidence of precautionary drawdowns after the disclosure of the 2011 EBA stress test results. Specifically, firms chose to use 9.5 pp more of undrawn funds (or 1.2 pp more of granted, undrawn plus drawn) between June and July from lines extended by banks performing worse in the stress test, see Table 1. Moreover, we find no evidence, prior to the disclosure of the results, that credit lines extended by worse-performing banks were used more intensively than lines granted by other banks. In addition, we show that firms that precautionarily drew down funds after the disclosure of the results decided to pay back drawn funds a few months later, explaining the lower usage of credit lines granted by worse-performing banks vis-à-vis lines granted by better-performing banks in September. Thus, after the initial worries dissipated, precautionary drawdowns were restored to credit lines, supporting the interpretation of a precautionary motive instead of a genuine liquidity need. Our results remain robust to excluding from our sample banks with high exposure to home sovereigns, banks that received public funds or were part of a merging process, or public banks. In addition, we find that firms did not use credit lines more intensively due to a fall in other lending sources before the disclosure of the results.

Affected banks tightened their lending standards. Since banks could have predicted their performance in the stress test after knowing the assumptions in the exercise, they were able to take mitigating actions. We find that worse-performing banks were approximately 10 pp more

Table 1
Effect of the 2011 Stress Test on Credit Line Usage

	Change in Drawn June / July 2011	
	Over Drawn + Undrawn	Over Undrawn
	(1)	(2)
Underperforming in the test	0.012***	0.095**
	(0.003)	(0.044)
Controls	Y	Y
Firm FE	Y	Y
Observations	93,010	90,375
R-squared	0.5468	0.4460

NOTES: The table presents a set of regressions of the change in drawn funds from credit lines over the period June / July 2011, which includes the announcement date of the stress results (July 15, 2011), on a stress test performance variable, bank and credit line controls. In column 1, the change in drawn funds is measured relative to drawn and undrawn amounts. Column 2 measures the change in drawn funds relative to undrawn funds in June 2011. ST-Underperforming is a dummy variable that takes value one if the bank had a CT1R below 6% under the adverse scenario of the 2011 stress test exercise. The sample only includes firms that have at least two outstanding and not fully used credit lines in June from two different banks. To avoid extreme negative values of the dependent variable, column 2 does not include credit lines whose initial usage is above 99%. All regressions include firm fixed effects. Standard errors are double clustered at the bank and firm levels and reported in parentheses.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

likely to decrease the total amount of a credit line a quarter before the disclosure date. Moreover, such different behaviour was not observed in the previous quarter (before the exercise's assumptions were known) and the following (after the results became public). Additionally, banks with a worse performance in the test and more significant undrawn credit line balances cut term lending more to firms without credit lines. In particular, for banks performing worse in the test, larger levels in undrawn credit line-to-assets were linked to higher probability of decreasing lending during the second and third quarter of 2011. These results can be explained by the impact of drawdowns on bank liquidity and capital buffers. Moreover, our second finding suggests that banks cannot fully mitigate their exposure to undrawn credit lines by just downsizing them. As a result, banks may find it necessary to adjust their credit policy along other dimensions, such as reducing term lending to other types of firms.

The study bears important implications for the design of stress tests, prudential policy, and the regulation of credit lines. From a prudential point of view, acknowledging this cost of disclosing stress test results is important, and points out the relevance of designing and communicating adequately remedial actions for worse performing banks in this type of exercises. Finally, our study suggests that stricter liquidity and capital requirements on the unused part of credit lines can be useful, as relatively large drawdowns can be expected when negative news about banks are published.

REFERENCE

Khwaja, A. I. and Mian, A. (2008). Tracing the impact of bank liquidity shocks: Evidence from an emerging market. American Economic Review, 98(4):1413–42.