Enhancing Loan Quality through Transparency:
Evidence from the European Central Bank Loan Level Reporting Initiative

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1. A description of which author(s) handled the data and conducted the analyses

All authors were involved in the collection as well as the analysis of the data. Data handling and analyses were performed as described in more detail below (see (2) and (5), in particular).

2. A detailed description of how the raw data were obtained or generated, including data sources, the date(s) on which data were downloaded or obtained, and the instrument used to generate the data (e.g., for surveys or experiments). We recommend that more than one author is able to vouch for the stated source of the raw data.

i. Our main analyses are based on the securitized loan-level data filed by European banks that subscribed to the European Central Bank's (ECB) repo financing programs by pledging their asset-backed securities as collateral. The loan-level data are compiled by the European DataWarehouse (ED), the centralized platform in Europe, which collects, stores and distributes standardized ABS loan-level data. Loumioti emailed Andrea Walbrecht (Vice President of ED) for accessing the loan-level data in January 2014. Upon approval, Loumioti collected the ECB loan-level data in Frankfurt on 10–12 June 2014. In our analyses, we use the July 2014 version of the data. ED performs on-going checks on the data, and when necessary backfill and correct potential errors. Thus, the current SME loan level data from 2013Q1 to 2014Q2 may be different from the dataset collected and used.

ii. The raw data was prepared for analysis by Ertan and Loumioti from January to April 2015. This process entailed appending individual loan-level reports (each raw report is at the ABS-quarter level.) As shown in Panel A of Table 1, the cleaning process was undertaken to remove pre-2009 loans (to exclude the effects of loans issued during the credit boom) and to fix data errors, including 1) ambiguous lender names, 2) missing key independent variables in regression analyses, and 3) timing issues (e.g., maturity date or reporting data smaller than origination date). The vast majority of these errors occurred during the grace period (January 2013-September 2013) where banks were trying to fully comply with the new disclosure requirements. Eventually, our estimation sample includes 2,961,217 loan-quarters from seven European countries.

iii. The ED assigns codes to the variables in the loan-level data set.

See https://www.ecb.europa.eu/paym/coll/loanlevel/transmission/html/index.en.html

Appendix B provides variable definitions. The specific ED codes of our regression variables are as follows. Dependent variables: whether a loan is in default (based on 121, 122, as125), delinquent amount (based on as115 and as117, interest and principal amounts in arrears), number of days in delinquency (based on as116 and as118, interest and principal days in arrears), and loss given default (as37).

Control variables: interest rate (as80), collateralization (based on as26), years to maturity (based on as51), securitized loan amount (based on as56 and as54), and lending relationship.

Suppressed fixed effects: indicators for loan purpose (as57), loan type (as65), 1-digit NACE borrower industry (as42), borrower type (as18), reporting quarter (as1) and ABS deal id (as2).

iv. The supplementary sources for our data are the following: Bankscope (bank financials), Markit (bank credit default swap (CDS) spreads), Bloomberg (bank asset-backed security data and bank bond data), Capital IQ (bank bond identification and quarterly bank financials in untabulated additional tests), and the ECB Statistical Datawarehouse (SME loan figures mentioned in the paper as well as macroeconomic figures used in the Online Appendix and in the response letter). Access to these databases has been obtained via institutional subscriptions, except for the ECB Statistical Datawarehouse, which is publicly available: http://sdw.ecb.europa.eu/. Ertan and Loumioti handled these sources.

v. Ertan and Loumioti performed all statistical analyses and empirical estimations.

vi. All authors vouch for the stated sources of the raw data.

3. If the data are obtained from an organization on a proprietary basis, the authors should privately provide the editors with contact information for a representative of the organization who can confirm data were obtained by the authors. The editors would not make this information publicly available. The authors should also provide information to the editors about the data sharing agreement with the organization (e.g., non-disclosure agreement, any restrictions imposed by the organization on the authors with respect to publishing certain results).

The data were obtained from the ED on a proprietary basis, although access to loan-level data is available for research purposes and subject to an approval by EDW:

https://eurodw.eu/portfolio-item/accessing-ed-loan-level-data/. Due to the restrictions imposed by the contract we signed, we are not permitted to reveal identities of individual banks and names of asset-backed securities as well as report any loan-level data in the paper. Paragraph 2.5 of the ED contract reads: "(…) provided that Data User will ensure that no individual loan level data is transmitted, displayed or otherwise made available directly or indirectly."

4. A complete description of the steps necessary to collect and process the data used in the final analyses reported in the paper. For experimental papers, we require information about subject eligibility and/or selection, as well as any exclusion criteria.

We describe our data sources and sample selection in section 3 of the paper. For further details, also see (2) and (5) of this document.

5. Prior to final acceptance of the paper, the computer program used to convert the raw data into the dataset used in the analysis plus a brief description that enables other researchers to use this program. Instead of the program, researchers can provide a detailed step-by- step description that enables other researchers to arrive at the same dataset used in the analysis. The purpose of this requirement is to facilitate replication and to help other researchers understand in detail how the sample was formed, including the treatment of outliers, Winsorization, truncation, etc. This programming is in most circumstances not proprietary. However, we recognize that some parts of the data generation process may indeed be proprietary or otherwise cannot be made publicly available. In such cases, the authors should inform the editors upon submission, so that the editors can consider an exemption from this requirement.

We use Stata to convert the raw data and perform all analyses. The Stata do-file "ELW_code_updated" used the ED loan-level dataset as input and yields the content of the main analysis. We also provide the SME loan data template so that researchers can better understand the content of the dataset and the coding of the variables.

6. Data and programs should be maintained by at least one author (usually the corresponding author) for at least six years, consistent with National Science Foundation guidelines.

The authors will maintain all data and programs for at least six years except for the ED loan-level data set. As per paragraph 2.7 of the contract with the ED, "Upon the termination of this Agreement all copies of the Data must be destroyed or deleted unless required for regulatory purposes."