Online Appendix

Appendix 1: Data Construction

In this study, we use three different datasets. The period under review is 2008-2011. The first sample is a panel of "active" bank-firm linkages, corresponding to banks lending a positive amount to firms. It is drawn from a large loan level sample gathered by the French bank supervisor (the *Autorité de Contrôle Prudentiel et de Résolution*). This sample allows us to study the effect of capital requirements on the *intensive margin* of lending (*i.e.* the decision of how much to lend conditional on lending at all). The second sample is a panel of active and inactive linkages, *i.e.* linkages corresponding to firms with potential lenders, with banks lending positive amounts and banks not lending to each firm. This sample allows us to study the *extensive margin* of lending (*i.e.* the decision to extend a loan or not, irrespective its amount). Our third and last sample is a firm level version of the second one: it contains information on the actual capital requirements faced by firms, as well as other balance sheet items available from separate accounting data.

1. Intensive margin sample

1.a. The loan level survey

Our starting point is a large sample of loans extended by French banks to French firms over the 2008-2011 period. This dataset is built using the results of a confidential survey, conducted in 2012 by the French prudential authority. This survey required the six largest banking groups in France to provide detailed information on all their corporate loan exposures along with firm and bank identifiers that make it possible to match bank loans and firm level data. This survey collects information on capital requirements of each loan. Its coverage is also very wide, as the six banking groups surveyed account for about 80% of all corporate loans in the country.

The sampling design of this survey is the following: using an ancillary dataset (the French Credit Register aka *Centrale des Risques*), the French prudential authority drew up the list of all firms to which at least one bank subsidiary has an exposure of at least € 25,000 over the 2008-2011 period. This list was then sent to all six banking groups, which were asked to report all of their exposures to each of these firms over the entire 2008-2011 period. This

leads to slightly more than three million exposures of bank subsidiaries to firms. In the rest of this paper, we will refer to bank subsidiaries as "banks".

We keep four variables from this loan survey. The first one is loan size. We construct it using the exposure at default (EAD), which is a regulatory quantity equal to the amount outstanding for most non-defaulted loans. Credit lines require a special treatment: their EAD is equal to the size of the credit line, multiplied by a regulatory ratio (known as the Credit Conversion Factor).[1] EAD for undrawn lines is thus smaller than the commitment. There are 2,914,962 loans reported in the database among which 10% have an on-balance sheet and an off-balance sheet EAD, 70% have just an on-balance sheet EAD and 20% have just an off-balance sheet EAD. The second variable is the internal capital requirements (CRs), which is computed by banks under the Basel II regulation, using either their internal model – adopting the "advanced approach"– or the so called "standardized approach". CRs are expressed as a percentage of the EAD. Under the advanced approach, it is a function of the probability of default, the loss given default and the maturity. Under the standardized approach of the Basel II regime, bank supervisors impose an exogenous mapping between a public credit rating of the firm on the one hand and capital requirements on the other hand. If no external rating is available a 100% weight applies. The third variable is a dummy variable equal to 1 if the bank is allowed to use internal models. The fourth variable is a dummy equal to 1 if the loan is classified as "corporate" or "retail" for regulatory purposes. "Retail loans" are typically extended to smaller firms and are subject to lower capital requirements all other things being equal.

1.b. Firm-bank linkage sample

We then collapse loan level data into firm-bank level data. Some firms may have multiple loans from the same bank (for example, a credit line, a secured loan and a short-term loan). To simplify the structure of the data, we collapse these exposures by adding up all the different EADs, and by computing the EAD-weighted average of capital requirements. The "internal model" dummy is the same for all corporate loans granted by the same bank, so aggregation is straightforward for this variable.

[1] More precisely, under the advanced IRB approach, for credit lines, the Exposure at Default (EAD) is equal to the commitment times the Credit Conversion Factor (CCF). The CCF measures the fraction of the off-balance sheet commitment that could end up on-balance sheet. To compute it, the bank uses an internal model.

We then remove two categories of firm-bank-year observations from this sample. Firstly, we restrict ourselves to loans that banks refer to as "corporate" exposures. The main reason for this is that, given the sampling technique of our survey (only firms borrowing at least € 25,000 from at least one bank), the coverage of corporate exposures is almost exhaustive, while for retail exposures it is likely to be sparser. However, in aggregate, our restriction to corporate loans is not too restrictive. According to COREP data (the French equivalent of the US Call Reports), the corporate portfolio accounts for about 70% of the total credit exposure of the French banks to the non-financial corporate sector. In our data (which are skewed towards larger, hence more corporate, loans), the corporate portfolio represents only 45% of the loans, but as much as 89% of the aggregate volume of exposures. Secondly, we also exclude from the sample a few banks (subsidiaries) that do not consistently report information over time. We end up with 82 different "banks", each one of them being a subsidiary of one of the six large groups on which our loan level data is constructed.

Finally, we merge this dataset with firm level accounting and credit rating information available from the Banque de France (*Centrale des Bilans*). Such information is updated annually. Accounting information comes from the tax forms that firms have to fill in and provides us with detailed data on firms' balance sheet and income statement. Credit ratings are awarded by a specific department of the Banque de France.

After these manipulations, we end up with 335,042 observations. This panel is unbalanced as each bank may not be actively lending to all of its clients every year over the period under review. Table 1, Panel A, provides summary statistics for the EAD and CRs. The mean EAD is € 1.63 million and the mean capital requirements is 6.92%. This sample only contains bank-firm-year linkages that are "active" in the sense that the firm borrows a positive amount from the bank. Hence, this sample only allows us to investigate the impact on the intensive margin of lending, *i.e.* the size of loans conditional on the decision to lend at all.

2. Extensive margin sample

2.a. Sample construction

To study the extensive margin of lending, we need to observe the creation or termination of "active" bank-firm linkages. To do this, we artificially create "inactive" bank-firm linkages that correspond to banks that could potentially lend to the firm, but do not. For each firm, we thus need to define the set of potential lenders. We make the following assumption: we

assume that, at each date t, the set of potential lenders to firm f consists of all banks b that do lend, at any point in time, to f.

To implement this, we repeat the same procedure as for the intensive margin sample. We start off with the loan level data described in Section 1 and collapse them into firm-bank-year data. At this stage, we create new bank-firm-year observations so that the panel becomes fully balanced: each bank-firm linkage has now 4 observations, one for each year. Newly created bank-firm-year linkages correspond to "potential" bank-firm relationships where firms are not actually borrowing from banks, so we set the loan amount to zero. More importantly, we do not observe the capital requirements when the bank does not actually lend to the firm, so we need to impute them. We present our imputation approach in the following section. Overall, the implicit assumption that we make in constructing this extensive margin sample is that a firm can only borrow from banks that have been observed to lend at least once over the 2008-2011 period.

Finally, we remove the same firm-bank-year observations as in the intensive margin sample: all "retail" loans and loans extended by a few banks that were not consistently reporting loans over time. We then merge the data with accounting and rating data from the Banque de France. Overall, the creation of "inactive" bank-firm linkages significantly increases sample size. The balanced panel contains 482,345 observations against 335,042 in the unbalanced panel: hence, "zero lending" observations account for about a third of the sample. There are 108,285 distinct firms for 189,039 firm-bank pairs, so that the average firm is linked to 1.75 banks over the period.

2.b. Imputing capital requirements for "inactive" bank-firm linkages

In the extensive margin data, we have created observations where the bank *does not* lend to the firm. In this case, we obviously do not observe the CRs that the bank would be facing if it had decided to lend. We describe here how we impute these CRs. To do this, we start off with the unbalanced panel. For each bank, we compute the average CRs of all loans extended to firms with the same rating. Let b be the bank index, f the firm index, r the rating and t the time index. We compute:

$$\overline{K}_{b,r,t} = \frac{1}{N_{b,r,t}} \sum_{f \in r} K_{b,f,t} \qquad (3)$$

where $N_{b,r,t}$ is the number of firms of rating r to which bank b lends at t. For all bank-firm pairs in the balanced panel, we then set the CRs to be equal to $\overline{K}_{b,r,t}$. We thus assume that each bank applies the same capital requirements to all firms that have the same Banque de France rating at a given year. Table 1, Panel B, shows the summary statistics for the balanced panel. Compared to the unbalanced data, the average CRs is unchanged, but its standard deviation is divided by two. Indeed, capital requirements are now uniform within each of the 2,023 bank-rating-year buckets.

In Table A. 2, we describe the extent to which our imputation procedure captures variation present in the data. To simplify the exposition, we focus on a single year (2008). First, for each rating category, we regress observed capital requirements on the entire set of bank-dummies. We show that for the eight safest rating groups (from 1 to 8, *i.e.* 95% of the observations), a F-test strongly rejects the null hypothesis that all bank dummies are equal. For each rating category, this test equivalently rejects the hypothesis that imputed CRs are equal for all banks. For the three safest categories, *i.e.* for rating 1 to 3 (about 30% of the observations), the R^2 of the regression is high (above 40%), suggesting that the difference between bank models drive a large fraction of the variation.[2] The second part of Table A. 2 describes the heterogeneity in imputed CRs in the data. As expected, the distribution of expected CRs shifts to the right as risk increases, but the interquartile range hovers between 6 and 8 percentage points.

3. Firm level sample

Last, we collapse the extensive margin dataset previously constructed into a firm level dataset. The objective is to measure the impact of heightened capital requirements on firm level decisions and outcomes such as capital structure, investment and employment. We start from the exposure level dataset described in Section 1 For all observations corresponding to the same firm, we then take the average of all variables, with the exception of the exposure at default that we sum across all banks. Firm level accounting variables are not affected by this procedure, as they are by definition the same across all firm-bank linkages corresponding to the same firm-year. Note that we keep the information

[2] The first column associated to the rating 0 is a specific rating class. It is a rating that is attributed by the Banque de France to firms when "no adverse information has been collected". Hence, this category cannot be compared in an orderly manner with other rating. Moreover, some risk classes are lowly populated and the imputation regressions have lower R2. This issue concerns too few observations to actually matter and do not weight on our results.

related to the lender before collapsing. We create a dummy that takes the value of one when a firm borrows from a given bank (there are therefore 82 such dummies). Hence, even when working at the firm level, we are able to control for bank fixed effects and compare performances of firms borrowing from the same bank.

There is an important issue regarding the weighting scheme to use when averaging the capital requirements at the firm level. On the one hand, it would be desirable to weight the CRs associated to each loan by the EAD of these loans. However, in doing so, we would lose the information from imputed capital requirements and ignore the extensive margin. Take for example the case of a firm with two banking relationships. One of the two banks has constant CRs. The other one suddenly faces higher CRs, and stops lending: the firm borrows less and invests less. If we were to take the weighted average CRs across the two banks, we would see no change in the CR, and a reduction in lending. While the two are actually connected, our model would fail to make the connection. As we believe that bank decisions at the extensive margin of lending (*i.e.* the choice between lending and not lending) should affect the amount of debt that firms may build up, and ultimately their ability to invest, we do not want to ignore this information. On the other hand, using equally weighted CRs would be improper because it would give the same importance to CRs associated with loans of various sizes.

We thus implement the following hybrid solution: given that each bank-firm pair has systematically at least one non-zero lending observations over the period, we could weight the CRs associated to each loan by *the EAD averaged over the entire period for each bank-firm pair*. Hence, we avoid giving the same weight to CRs related to loans of various sizes but we do not ignore the extensive margin. The summary statistics at the firm level are presented in Panels C of the Table 1. The average firm has a total EAD across all its lender of € 2.523 million. The weighted average capital requirements faced by actual and potential lenders are 6.9% in both cases (equally weighted CR and *average EAD*-weighted CR). The median firm has total assets of € 3.49 million, an employment of 23 workers, gross fixed assets of € 1.55 million and capital expenditures of € 88,000. Our focus on corporate loans excludes very small firms from the sample.

Appendix 2: Additional Tables

Table A.1: Testing the imputation procedure

	Capital Requirements (2008)												
Rating Category	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Observations	1,455	3,044	7,986	12,546	18,386	14,808	13,195	8,201	2,879	276	273	111	3,059
R-squared	0.065	0.646	0.530	0.382	0.134	0.041	0.019	0.049	0.057	0.062	0.139	0.132	0.164
F-test	3.4	172.05	236.26	203.3	70.72	15.07	6.38	10.25	4.28	.66	1.75	.78	17.41
Prob > F	0	0	0	0	0	0	0	0	0	.9	.02	.72	0
p25	4.76	1.65	2.45	3.67	5.3	6.07	6.78	6.09	7.48	7.8	6.6	5.48	0
p50	7.17	3.92	4.69	5.84	7.72	8	8	8	8	8	8.26	8.23	0
p75	8.45	7.52	8	8	8	8.14	9.07	11.33	12	12	12	12	8

Note: In this table, we start off with the basic loan level data of active bank-firm relationships described in Table 1, Panel A. We focus on one single year: 2008. We then regress the observed capital requirements on bank dummies. We run one regression per Banque de France rating category (numbered from 1 to 12, category #1 being the safer category and category #12 the riskiest one). Each column of the table reports the regression result in the corresponding rating class. In the first line, we report the number of observations used, and in the second line the resulting R-squared. In the third line, we report the F-statistic of joint significance of bank dummies, as well as the associated p-value in the fourth line. Since there are many bank dummies, we do not report all regression coefficients, but the quartile breakpoints of their distribution. The lines p25, p50 and p75 indicates the breakpoints associated with the 25^{th}, 50^{th} and 75^{th} percentile of the distribution of the average capital requirements conditional on the rating category. Reading: For all firms of rating category 4, there are 18,386 bank-firm-year active linkages in our basic sample. Regressing capital requirements on bank dummies leads to a R-squared of 13.4%, and an F statistic of joint significance of 70.72, so the data strongly reject a model where all CRs are equal across banks in this rating category. Looking at the distribution of CRs, the median is 7.72.

Table A.2 : Persistence of exposure across years and datasets

	Capital requirements (CR)							
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Log of (1+2006-Q4 Exposure)	0.738***	0.784***	0.714***	0.714***	0.637***	0.636***	0.792***	0.573***
	(0.027)	(0.015)	(0.016)	(0.016)	(0.032)	(0.031)	(0.037)	(0.041)
Observations	335,120	335,120	333,048	333,038	331,590	162,827	45,152	70,114
Adjusted R-squared	0.168	0.194	0.225	0.238	0.466	0.486	0.514	0.501
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Bank FE	NO	YES	YES	YES	YES	YES	YES	YES
Firm Size FE	NO	NO	YES	YES	YES	YES	YES	YES
Bank*Year FE	NO	NO	NO	YES	YES	YES	YES	YES
Firm FE	NO	NO	NO	NO	YES	YES	YES	YES
Firm*Year FE	NO	NO	NO	NO	NO	YES	YES	YES
Cluster	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm
Sample	All	All	All	All	All	All	Standard	IRB

Note: In this table, the EAD corresponding to a given firm-bank relationship over the post-Basel II period (2008-2011) are regressed on the exposure observed in December 2006 in the credit register for the same bank relationship. We start from the sample described in Table 1, Panel A. We then restrict our data to the firm-bank-year linkages with a strictly positive amount in the national credit register in December 2006 as well at least one positive amount over the period 2008-2001 for which the actual capital requirements are reported by the banks. Columns 1 to 5 progressively include a large array of fixed effects. . Columns 6-8 focus on observations corresponding to firms borrowing from at least two different banks, *i.e.* observations for which the model with firm-year fixed effects is identified. Column 6 does include the firm-year fixed effect. Column 7 is limited on the sample of banks operating under the standardized approach. Column 8 is limited on the sample of banks operating under the Internal Ratings-Based approach. Error terms are double clustered at the bank and firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.3: Capital requirements heterogeneity under the Standardized Approach

	Capital Requirements (2008)												
Rating Class	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Observations	1,238	1,302	3,414	5,564	8,164	6,365	6,099	3,539	1,320	179	124	42	870
R-squared	0.073	0.569	0.587	0.467	0.333	0.230	0.124	0.139	0.146	0.059	0.413	0.657	0.882
F-test	3.67	60.02	145.86	142.42	115.69	51.2	24.63	15.77	6.10	.44	3.62	3.32	208.69
Prob > F	0	0	0	0	0	0	0	0	0	.99	0	0	0
p25	4.61	4.61	5.72	6.4	8	8	8	8	8	8	8	8	0
p50	7	8	8	8	8	8	8	8	8	8	8	8	8
p75	8.45	8	8	8	8	8	8	8	8	8.45	8.29	9.45	10.12

Note: In this table, we start from the basic loan level data of active bank-firm relationships described in Table 1, Panel A. We focus on one single year: 2008. We only consider the exposures for which the standardized approach applies. We then regress the observed capital requirements on bank dummies. We run one regression per Bank of France rating class (numbered from 1 to 12, class #1 being the safer class and class #12 the riskiest). Each column of the Table reports the regression result in the corresponding rating class. In the first line, we report the number of observations used, and in the second line the resulting R squared. In the third line, we report the F-statistic of joint significance of bank dummies, as well as the associated p-value in the fourth line. Since there are many bank dummies, we do not report all regression coefficients, but the quartile breakpoints of their distribution. The lines p25, p50 and p75 indicates the breakpoints associated with the 25^{th}, 50^{th} and 75^{th} percentile of the distribution of average capital requirements conditional on the rating class. Reading: For all firms of rating class 2, there are 3,414 bank-firm-year active linkages in our basic sample. Regressing capital requirements on bank dummies leads an R squared of 58.7%, and an F statistic of joint significance of 145.86, so the data strongly reject a model where all CRs are equal across banks in this rating class. Looking at the distribution of CRs, the median is 5.72.

Table A.4: Extensive margin regressions with a Tobit Model vs OLS

	Log of (1+Exposure at Default)									
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
Imputed CRs (lag 1)	-0.099***	-0.145***	-0.048***	-0.080***	-0.035	-0.060	-0.038*	-0.056	-0.033	-0.048**
	(0.017)	(0.023)	(0.017)	(0.024)	(0.025)	(0.037)	(0.022)	(0.000)	(0.021)	(0.020)
Observations	487,054	487,054	487,054	487,054	482,345	482,345	482,344	482,345	482,340	482,345
Adjusted R-squared	0.006		0.052		0.173		0.194		0.207	
Econometric Model	Linear	Tobit	Linear	Tobit	Linear	Tobit	Linear	Tobit	Linear	Tobit
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	-	-
Firm Size FE	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES
Firm Rating FE	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
Bank FE	NO	NO	NO	NO	NO	NO	YES	YES	-	-
Bank*Year FE	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
Cluster	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm

Note: This table shows the estimates of regressions (4) on the sample of both active and inactive bank-firm-year lending relationships described in Table 1, Panel B. Columns (1), (3), (5), (7) and (9) use a linear model as in the table 4. Columns (2), (4), (6), (8) and (10) use a Tobit model. For active relationships, observations come directly from our main sample. For inactive relationships, we set the EAD to zero. For all active and inactive relationships, we use imputed capital requirements defined by the average CRs within each bank-rating category-year category. In the regression, imputed capital requirements are lagged by one year. Various fixed effects are progressively added between columns 1 and 10. Unlike for Table 3, all firms have multiple bank relationships, so firm-year fixed effects are identified on the entire sample. Error terms are double clustered at the bank and firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.5: Extensive Margin Regressions on the Intensive Margin Sample

	Log of (1+Exposure at Default)						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Imputed CRs (lag 1)	-0.033 (0.021)	-0.028* (0.016)	-0.051** (0.021)	-0.041** (0.016)	-0.029** (0.013)	-0.029** (0.014)	-0.024 (0.015)
Observations	334,753	334,752	311,583	311,583	311,577	221,949	193,059
Adjusted R-squared	0.175	0.200	0.418	0.448	0.465	0.448	0.440
Year FE	YES	YES	YES	YES	-	-	-
Firm Size FE	YES	YES	YES	YES	YES	YES	YES
Firm Rating FE	YES	YES	YES	YES	YES	YES	YES
Bank FE	NO	YES	NO	YES	-	-	-
Firm FE	NO	NO	YES	YES	YES	YES	-
Bank*Year FE	NO	NO	NO	NO	YES	YES	YES
Firm*Year FE	NO	NO	NO	NO	NO	NO	YES
Cluster	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm

Note: This table shows the estimates of regressions (4) on the sample o active bank-firm-year lending relationships described in Table 1, Panel A. For all active relationships, we use imputed capital requirements defined by the average CRs within each bank-rating category-year category rather than the actual capital requirements. In the regression, effective capital requirements are lagged by one year. Various fixed effects are progressively added between columns 1 and 7. Unlike for Table 3, all firms have multiple bank relationships, so firm-year fixed effects are identified on the entire sample. Error terms are double clustered at the bank and firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.6: Firm Level Exposure at Default (Effective Capital Requirements)

	Log of (1+Total EAD)						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Effective CRs (lag 1)	0.008***	0.008***	-0.004	-0.004*	-0.005**	-0.005**	-0.005**
	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Observations	144,562	144,562	125,454	125,460	125,460	125,454	125,454
Adjusted R-squared	0.000	0.000	0.692	0.721	0.727	0.729	0.729
Year FE	NO	YES	YES	YES	YES	YES	YES
Firm FE	NO	NO	YES	YES	YES	YES	YES
Firm Rating FE	NO	NO	NO	YES	YES	YES	YES
Bank FE	NO	NO	NO	NO	YES	YES	YES
Industry-year FE	NO	NO	NO	NO	NO	YES	YES
Country-year FE	NO	NO	NO	NO	NO	NO	YES
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm

Note: In this table, we show the regression results of equation (6) for the total EAD aggregated at the firm level. Bank fixed effects are dummy variables for each bank with which the firm has established a relationship. Our sample is made up of firm-year observations and is described in Table 1, Panel C. Firm level capital requirements are computed by averaging each effective capital requirements across all bank-firm relationships and by weighting each effective capital requirements with the bank-firm EAD. In the regression, effective capital requirements are lagged by one year. Total EAD is computed by summing EAD across all lenders for a given firm for a given year. Various fixed effects are progressively added between columns 1 and 7. County refers to the French département which are French local jurisdictions that are about the same size as Metropolitan Statistical Areas (MSAs) in the US. Error terms are clustered at the firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.7: Firm Level Balance Sheet Analysis (Effective Capital Requirements)

	Log of (1+Firm Total Exposure at default)	Log of (1+Firm Bank Credit)	Log of (1+Firm Other Liabilities)	Log of (1+Firm Total Liabilities)	Log of (1+Firm Own Funds)	Log of (1+Firm Total Assets)
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Imputed CRs (lag 1, avg EAD weighted)	-0.005**	-0.008***	0.000	-0.001*	-0.001	-0.001***
	(0.002)	(0.002)	(0.001)	(0.000)	(0.001)	(0.000)
Observations	125,454	125,454	125,454	125,454	125,454	125,454
Adjusted R-squared	0.729	0.827	0.969	0.974	0.968	0.988
Year FE	-	-	-	-	-	-
Firm FE	YES	YES	YES	YES	YES	YES
Firm Rating FE	YES	YES	YES	YES	YES	YES
Bank FE	YES	YES	YES	YES	YES	YES
Industry-year FE	YES	YES	YES	YES	YES	YES
Country-year FE	YES	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

Note: In this table, we show the regression results of equation (6) for the total EAD aggregated at the firm level, the total bank credit, the other liabilities, the total liabilities, the own funds and the total assets as reported in the firms' balance sheet. Bank fixed effects are dummy variables for each bank with which the firm has established a relationship. Our sample is made up of firm-year observations and is described in Table 1, Panel C. Firm level capital requirements are computed by averaging each effective capital requirements across all bank-firm relationships and by weighting each capital requirements with the bank-firm EAD. In the regression, effective capital requirements are lagged by one year. Total EAD is computed by summing EAD across all lenders for a given firm for a given year. Various fixed effects are progressively added between columns 1 and 6. County refers to the French *département* which are French local jurisdictions that are about the same size as Metropolitan Statistical Areas (MSAs) in the US. Error terms are clustered at the firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.8: Firm Level Outcomes (Effective Capital Requirements)

	Log of (1+Firm Total Assets)	Log of (1+gross Fixed Assets)	Log of (1+net Fixed Assets)	Log of (1+Tangible Fixed assets)	Log of (1+Capital Expenditures)	Log of (1+Employment)
	(1)	(2)	(3)	(4)	(5)	(6)
Effective CRs (lag 1)	-0.001***	-0.002***	-0.003***	-0.003***	-0.005**	-0.001*
	(0.000)	(0.001)	(0.001)	(0.001)	(0.003)	(0.000)
Observations	125,454	125,454	113,416	125,454	125,454	125,454
Adjusted R-squared	0.988	0.985	0.976	0.977	0.722	0.979
Year FE	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Firm Rating FE	YES	YES	YES	YES	YES	YES
Bank FE	YES	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

Note: In this table, we show the regression results of equation (6) for various firm level outcomes. Bank fixed effects are dummy variables for each bank with which the firm has established a relationship. Our sample is made up of firm-year observations and is described in Table 1, Panel C. Firm level capital requirements are computed by averaging each effective capital requirements across all bank-firm relationships and by weighting each effective capital requirements with the bank-firm EAD. In the regression, effective capital requirements are lagged by one year. All specifications include year, firm, firm rating, bank, industry-year and county-year fixed effects. Error terms are clustered at the firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.9: Firm Level Outcomes; Subsamples analysis (Imputed Capital Requirements)

	Log of gross Fixed Assets									
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
Effective CRs (lag 1)	-0.001	-0.003***	-0.003**	-0.001**	-0.001	-0.003***	-0.001	-0.002***	-0.001	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	72,206	53,238	51,984	73,470	64,079	61,356	66,036	59,403	63,923	61,517
Adjusted R-squared	0.982	0.963	0.982	0.986	0.984	0.972	0.990	0.978	0.988	0.981
Year FE	-	-	-	-	-	-	-	-	-	-
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Firm Rating FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Bank FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Industry-year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country-year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm
Sample	Large firms	Small firms	High tangibility industries	Low tangibility industries	Low MRPK firms	High MRPK firms	Old firms	Young firms	Highly capitalized firms	Poorly capitalized firms

Note: In this table, we show the regression results of equation (6) for the gross fixed assets of firms on various subsamples. Bank fixed effects are dummy variables for each bank with which the firm has established a relationship. Our sample is made up of firm-year observations and is described in Table 1, Panel C. Firm level capital requirements are computed by averaging each effective capital requirements across all bank-firm relationships and by weighting each capital requirements with the bank-firm EAD. In the regression, effective capital requirements are lagged by one year. All specifications include year, firm, firm rating, bank, industry-year and county-year fixed effects. Error terms are clustered at the firm level. In columns (1) and (2), large and small firms (resp.) are defined as the firms with total assets at the beginning of the sample period above and below (resp.) the median total assets. In columns (3) and (4), high and low assets tangibility industries (resp.) are defined as industry (86 categories) with a median ratio of tangible fixed assets over the sum of fixed assets and account receivable above and below (resp.) the median value of this median ratio. In columns (5) and (6), low and high marginal revenue product of capital (MRPK) firms are defined as firms with a ratio of value added over gross fixed assets at the beginning of the sample period below and above (resp.) the median MRPK. In columns (7) and (8), old and young firms (resp.) are defined as the firms with age at the beginning of the sample period above and below (resp.) the median age. In columns (9) and (10), highly and poorly capitalized firms (resp.) are defined as the firms with ratio of own funds over total assets at the beginning of the sample period above and below (resp.) the median ratio. For each pair of columns, the first one present the regression on the subsample where firms are expected to be less constrained and thus less affected by higher CRs. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.10: Intensive Margin Regressions; on-balance sheet EAD only

	Log of (1+On-balance Sheet Exposure at Default)						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Effective CRs (lag 1)	-0.012	-0.015	-0.026**	-0.025**	-0.023**	-0.030***	-0.033***
	(0.012)	(0.012)	(0.011)	(0.010)	(0.009)	(0.010)	(0.009)
Observations	334,929	334,928	311,809	311,809	311,803	192,951	192,943
Adjusted R-squared	0.100	0.128	0.462	0.487	0.500	0.465	0.446
Year FE	YES	YES	YES	YES	-	-	-
Firm Size FE	YES	YES	YES	YES	YES	YES	YES
Firm Rating FE	YES	YES	YES	YES	YES	YES	YES
Bank FE	NO	YES	NO	YES	-	-	-
Firm FE	NO	NO	YES	YES	YES	YES	-
Bank*Year FE	NO	NO	NO	NO	YES	YES	YES
Firm*Year FE	NO	NO	NO	NO	NO	NO	YES
Cluster	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm	Bank & Firm
Sample	Full	Full	Full	Full	Full	Multi-Banks	Multi-Banks

Note: This table shows the results of regression (4) for the intensive margin of lending. The dependent variable is the log of the on-balance sheet EAD, *i.e.* it excludes the off-balance sheet component of the EAD. The sample is described in Table 1, Panel A. It is made up of firm-bank-year linkages. By construction, all firm-bank-year linkages in the data are such that the bank lends a strictly positive amount to the firm in the relevant year. The Capital requirements are directly observed in the data. In the regression, effective capital requirements are lagged by one year. Columns 1 to 5 progressively include a large array of fixed effects. Columns 6 and 7 focus on observations corresponding to firms borrowing from at least two different banks, *i.e.* observations for which the model with firm-year fixed effects is identified. Column 7 does include a firm-year fixed effect. Error terms are double clustered at the bank and firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.

Table A.11: Total (Intensive and Extensive) Margin Regressions; SE clustered at the Bank-industry and Firm level

	Log of (1+Exposure at Default)						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Imputed CRs (lag 1)	-0.035*** (0.010)	-0.038*** (0.008)	-0.035*** (0.008)	-0.030*** (0.009)	-0.023*** (0.008)	-0.038*** (0.008)	-0.045*** (0.009)
Observations	482,345	482,344	474,323	474,323	474,317	315,301	304,259
Adjusted R-squared	0.173	0.194	0.393	0.414	0.431	0.382	0.359
Year FE	YES	YES	YES	YES	-	-	-
Firm Size FE	YES	YES	YES	YES	YES	YES	YES
Firm Rating FE	YES	YES	YES	YES	YES	YES	YES
Bank FE	NO	YES	NO	YES	-	-	-
Firm FE	NO	NO	YES	YES	YES	YES	-
Bank*Year FE	NO	NO	NO	NO	YES	YES	YES
Firm*Year FE	NO	NO	NO	NO	NO	NO	YES
Cluster	Bank*Industry & Firm	Bank*Industry & Firm	Bank*Industry & Firm	Bank*Industry & Firm	Bank*Industry & Firm	Bank*Industry & Firm	Bank*Industry & Firm

Note: This table shows the estimates of regressions (4) on the sample of both active and inactive bank-firm-year lending relationships described in Table 1, Panel B. For active relationships, observations come directly from our main sample. For inactive relationships, we set the EAD to zero. For all active and inactive relationships, we use imputed capital requirements defined by the average CRs within each bank-rating category-year category. In the regression, imputed capital requirements are lagged by one year. Various fixed effects are progressively added between columns 1 and 7. Unlike for Table 3, all firms have multiple bank relationships, so firm-year fixed effects are identified on the entire sample. Error terms are doubled clustered at the bank-industry and firm level. Stars indicate statistical significance (* for 10%, ** for 5% and *** for 1%). Standard errors are in brackets.