Credit constraints and firm characteristics. An empirical assessment of a survey-based Istat's indicator

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Abstract

This paper investigates the relationship between credit constraints and firm characteristics in Italy during 2015-2020. We derive an annual measure of perceived credit constraints using qualitative information from the Istat Business Confidence Survey and relate it to firm financials and other characteristics from the Italian Business Register. Using a linear probability model, we test the informative power of the indicator and find higher constraints for smaller and less productive firms located in Southern Italian regions. In addition, we explore the relationship between the new indicator of perceived credit constraint and financial conditions, finding that financially healthier firms experience lower obstacles in accessing external credit. The analysis brings novel empirical evidence about perceived measures of credit constraints in Italy over several years and provides a helpful indicator for future firm-level empirical and policy studies.

Keywords: Credit constraints, firm dynamics, Italian economy.

JEL Classification: O16, G20.

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1. Introduction

Accessing external finance is a crucial factor for firms. The literature has shown that limited access to external finance negatively influences firms' R&D and innovation activities (Hall 2002; Brown *et al.* 2009), wages (Michelacci *et al.* 2009), export (Minetti *et al.* 2011; Secchi *et al.* 2016), survival probability (Musso *et al.* 2008), default risk (Bottazzi *et al.* 2011), investments (Fazzari *et al.* 1988; Kaplan *et al.* 1997, 2000; Almeida *et al.* 2007), and growth (Bottazzi *et al.* 2014)[3].

Firms may become financially constrained if their activities are limited by the difficulty of obtaining external funds, e.g. because of information asymmetries between lenders and borrowers (Stiglitz *et al.* 1981; Jaffee *et al.* 1990). In turn, asymmetries may be related both to factors internal and external to firms. On the one hand, e.g. lack of proper information may increase perceived riskiness and induce a lack of financing for Small and Medium Enterprises (SMEs) (Cosh *et al.* 2009; Storey 2016). Indeed, SMEs are usually unlisted, may have less transparent track records, no collateral, and carry out activities which are more difficult to evaluate *vis-à-vis* larger firms – resulting in higher costs of external funds (Berger *et al.* 2006; Revest *et al.* 2012). Relatedly, newly established and young firms usually have a limited credit history, which makes it difficult for banks to predict the future probability of loan repayment and reduce financing opportunities (Gertler 1988; Devereux *et al.* 1990; Beck *et al.* 2006). Similarly, other contributions suggest that access to finance depends on the strength of firms' balance sheets, e.g. better financial figures reduce perceived riskiness (Jimenez *et al.* 2012; Holton *et al.* 2013; McQuinn 2019). On the other hand, firms may experience worse financing conditions for other external factors, for example, being in regions where financial markets are less developed (Djankov *et al.* 2007). In addition, lower financing opportunities may be present because of specific sectoral dynamics, as well as for the overall stance of the business cycle (Blanco *et al.* 2018; Finnegan *et al.* 2023).

3 The relation among firm performance, one the one hand, and financial constraints, on the other, may not be unidirectional. For example, Lahr and Mina (2020) show that innovation – and in particular new-to-market and product innovations – increases the likelihood for firms of facing financial constraints, due to uncertain market outcomes associated to innovative activities.

Measuring financial constraints poses challenges, as this information is typically unobserved, unlike other financial variables. Several contributions have tried to estimate measures of financial constraints indirectly. These methodologies include e.g. investment–cash flow sensitivities (FHP) (Fazzari *et al.* 1988) and the Kaplan and Zingales approach (KZ) (Kaplan *et al.* 1997)[4]. The seminal approach of Fazzari *et al.* (1988)[5] mainly suggests that financing constraints can be identified using the sensitivity of firm investment to internal funds (cash flow). Indeed, financially constrained firms, due to limited access to external financing, rely more heavily on internally generated funds to finance their investments. As a result, investment spending of constrained firms becomes more sensitive to changes in their cash flow positions. Kaplan and Zingales (1997, 2000) question the validity of this interpretation and show that, under certain assumptions, investment–cash flow sensitivities may increase as financing constraints are relaxed – with similar results found later by Almeida and Campello (2007). Among other concerns[6], they argue that financial variables employed in the FHP approach may become endogenous and not have a straightforward relation to constraints (Farre-Mensa *et al.* 2016).

In general, considerable debate exists concerning the possible methods for measuring financial constraints, as each method relies on diverse theoretical and/or empirical assumptions (Hadlock *et al.* 2010). In turn, another strand of literature has used measures of financial constraints collected through firm surveys. Indeed, surveys would allow assessing the role and factors influencing financing obstacles more directly, eliminating the need to infer constraints from financial information (Beck *et al.* 2006). Although this approach has its limitations – such as potential biases in self-reported data and representativeness concerns – the empirical literature using survey-based indicators generally agrees on the factors linked to credit constraints. For example, Beck *et al.* (2006) use the "World Business Environment Survey" (WBES) data[7] on a sample of over 10,000 firms from 80 countries and investigate the determinants of financing obstacles for firms. The authors find

4 Other approaches include the Whited and Wu index of constraints (WW) (Whited *et al.* 2006) and the Hadlock-Pierce index of constraints (Hadlock *et al.* 2010). The former derives a measure of constraints from a structural model, while the latter uses financial fillings to categorise financial constraints.

5 For a review of related works building on this approach, see Farre-Mensa and Ljungqvist (2016).

6 For an extensive literature review on the estimation of financial constraints, see also Hadlock and Pierce (2010).

7 The WBES is a major firm-level survey managed by the World Bank. The authors use data for 1999 and 2000 in developing and developed countries.

that older, larger, and foreign-owned firms report lower levels of financial constraints and that higher institutional development is associated with better access to finance. Similarly, Ferrando and Griesshaber (2011) document higher financial constraints for, e.g. younger EU firms, using self-assessment measurements from the "Survey on the Access to Finance of small and medium-sized Enterprises" (SAFE)[8,9]. Canton *et al.* (2013) investigate the determinants of perceived bank loan accessibility at the firm level using survey data for nearly 3,500 SMEs in 25 EU countries. They find that, overall, the youngest and smallest SMEs have the worst perception of access to loans[10]. Finally, Kuntchev *et al.* (2016) also confirm the above-mentioned relations using another survey-based measure of financial constraints (from the World Bank "Enterprise Survey").

Our analysis builds on and contributes to this literature, especially the one that derives and tests direct measures of financial constraints from survey data. Notably, this work assesses the relation among self-reported measures of credit constraints and firm characteristics for a large sample of Italian firms over a long time. We derive an indicator of perceived credit constraint at the firm level relying on qualitative information from the Istat "Business Confidence Survey", uniform across sectors and years. Using a linear probability model, we ask which firm-level characteristics relate to more significant perceived obstacles in accessing external finance – testing our indicator with results from the literature. We find higher constraints for smaller and less productive firms in less developed Italian regions. In addition, we explore the relationship between our new indicator and financial conditions at the firm level, finding that better financial conditions are related to lower perceived obstacles in accessing external finance. In particular, higher profitability appears associated with lower constraints, while higher debt levels are associated with higher constraints.

8 The authors use the second wave of the ECB-European Commission "Survey on the Access to Finance of small and medium-sized Enterprises" (SAFE), which provides evidence on the financial situation, financing needs and the access to financing of small and medium-sized enterprises as well as of a comparable sample of large firms in the euro area during the second half of 2009.

9 The authors find mixed results for the size variable while they find a significant relationship between financial constraints and ownership structure (e.g. listed firms are less likely to be financially constrained).

10 Looking at the effects of being financially constrained, Ferrando and Mulier (2022) use survey data from the "Survey on the access to finance of enterprises" (SAFE) for 9 EU countries between 2010 and 2014, and analyse the effect of being a discouraged borrower (i.e. firms that do not apply for a bank loan because they fear that their application will be rejected). They report a strong negative correlation between discouragement and firm investment and growth. Gómez (2019) performs a related analysis, using the SAFE survey for 12 EU countries from 2014 to 2017, and finds that credit constraints have strong negative effects on investment in fixed assets.

The remainder of the work is organised as follows. Section 2 describes the data sources, variables – in particular, the derivation of our annual measure of perceived credit constraints – and shows descriptive statistics. Section 0 focusses on the empirical strategy and Section 5 on the main estimation results and robustness checks. Section 6 concludes and elaborates on the avenues for further research.

2. Data and perceived credit constraint indicator

2.1 Data sources

To perform the analyses, we integrate three different sets of data over the period 2015-2020. To derive information on perceived credit constraints, we rely on qualitative data from the Istat "Business Confidence Survey" (BCS). This survey collects uniform quarterly information on the economic sentiment of enterprises active in manufacturing, construction, retail, and other services sectors. Secondly, we use administrative financial data on income statements and balance sheet accounts of Italian corporations drawn from official records filed in the Italian Chambers of Commerce (CCs) and available in Istat. Finally, we use structural variables (i.e. employment, economic activity, localisation) from the Italian Business Register (BR), which provides a framework for the integration of the above-mentioned microdata.

As far as the sample survey information is concerned, firms are asked – each quarter – to provide information on whether they perceive access to credit as 'more favourable', 'constant', 'less favourable', or 'unknown' – concerning the previous quarter. The survey collects harmonised cross-sectoral data and overall, in the period 2015-2020, it allows to retrieve more than 170,000 records (quarterly microdata), corresponding to ca. 14,000 enterprises.

Administrative data on annual economic accounts and income statements allow us to compute the main financial indicators used for the analysis. This data source involves about 700,000 corporations each year, corresponding to almost 4 million observations across 2015-2020. This data source mainly refers to limited companies that account for 22,5% of total firms and 57,2% of employment (in 2020).

Finally, firm annual financial data are complemented with structural information from the Business Register, including firm economic (NACE Rev.2) sector of activity, geographical location, and employment.

For firms with balance sheet information, data integration results in 87,883 complete quarterly records for the period 2015-2020 (Table 2.1). Apart from 2015, for which only the fourth quarter is available, each year has more than 15,000 quarterly records – related to about 5,000 firms yearly.

Table 2.1 - Quarterly records and number of firms (a)

Year	N. of records	N. of firms
2015	4,059	4,059
2016	19,820	7,131
2017	14,857	4,406
2018	16,855	5,226
2019	17,120	5,164
2020	15,172	4,593
Total	**87,883**	**30,579**

Source: Authors' elaborations on BCS-BR-CCs databases
(a) Only the fourth quarter of 2015 is available for the analysis.

Overall, integrated data refer to almost 9,000 distinct firms (Table 2.2, first column) whose average quarterly presence is 9.9 times. Each firm is present at least one quarter in each year, while no firms are present each quarter for all years (the maximum presence is 21 times). In comparison with the survey sample (Table 2.2, second column), integrated data have an overall satisfying share of coverage (Table 2.2, third column).

Table 2.2 - Number of univocal firms by macro sector

Macro sector (NACE Rev.2)	N. of univocal firms of integrated sample	N. of univocal firms of the survey sample	% Share of coverage of integrated sample
1 - Industry	5,132	6,784	75.6
2 - Construction	916	1,694	54.1
3 - Wholesale and retail trade	747	2,023	36.9
4 - Services	2,124	3,878	54.8
Total	**8,919**	**14,379**	**62.0**

Source: Authors' elaborations on BCS-BR-CCs databases

The missing companies (i.e. the companies not included in the panel) are mostly non-limited liability companies that are not obliged to submit their financial reports to the CCs.

As financial indicators and other firm characteristics are available annually, in the next subsection we compute a yearly firm-level aggregation of the quarterly variable about perceived credit constraints.

2.2 Perceived credit constraint indicator

Our main variable of interest is the firm-level measure of perceived credit constraints – derived from the 'BCS' survey. As discussed above, firms may report, each quarter, their financing (opportunities) conditions as 'more favourable', 'constant', 'less favourable', or 'unknown' – concerning the previous quarter (Appendix B reports the wording of the survey questions used to identify credit constraints)[11]. To relate this information to yearly firm characteristics, we retrieve an annual aggregation of such measures.

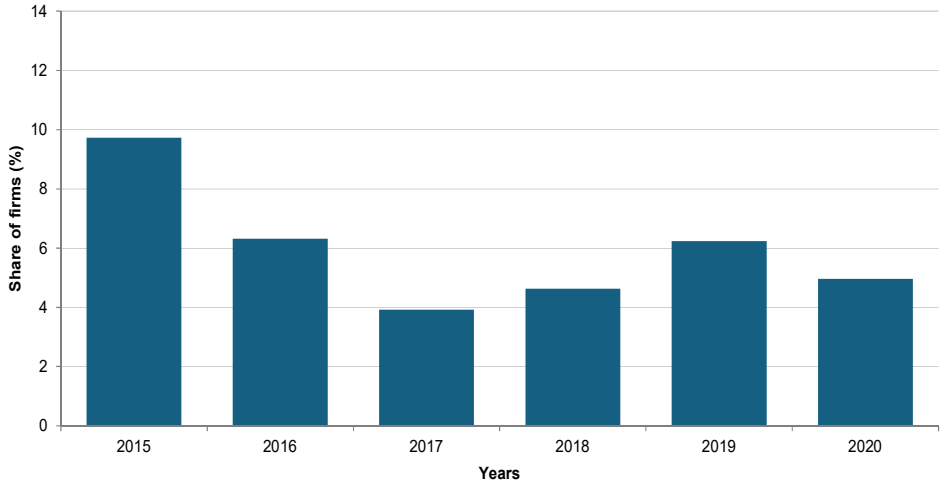
In each quarter, the survey information captures firms' perceived 'access to credit' *status* Q-o-Q. This implies that – absent reporting on firm-level initial conditions – the survey allows to derive only a relative status each quarter and not the actual levels. Moreover, since not all the firms report their conditions each quarter (see previous subsection), this creates missing data points in the firm-level status time series. Given these limitations, we derive an annual measure of perceived credit constraints proceeding in two steps. We first compute the number of times each firm reports 'less favourable' conditions in accessing credit relative to the number of quarters available each year (excluding quarters in which firms report an 'unknown' condition). Second, we define a firm as "credit constrained" – each year – if the condition 'less favourable' is reported more than half of the times over the quarters available for each firm (we test the robustness of such indicator also using other thresholds and restrictions on available quarters – see Section 5.1 and the Appendix A). We obtain a dummy indicator capturing perceived credit constraints at the firm level, which we employ for our empirical analysis. We start with a descriptive assessment of the indicator, which we present in the next Section.

11 Given our research question, we focus on Q.43. Other questions proved less informative – also given the lower firm response rates.

3. Descriptive evidence

Figure 3.1 displays the annual share of firms reporting perceived credit constraints using the indicator derived in the previous Section. As shown, the share of constrained firms appears at its maximum in 2015, decreases over 2016 and 2017, and increases again in 2018 and 2019 – finally decreasing in 2020. This dynamic seems consistent with the business cycle conditions observed in Italy over the period (Istat 2023; Istat 2021). Indeed, starting from 2015, and over 2016 and 2017, Italy experienced a recovery in GDP growth and a general ease in credit conditions. On the contrary, 2018 and 2019 saw a weakening of GDP growth, higher average interest rates, and declining credit and loan supply to business firms, with likely impacts on firm performance (Istat 2021). Regarding 2020, the lower share of constrained firms – despite the COVID-19 outbreak – may be a result of the increase in bank loans (Istat 2023) and the extensive number of support measures implemented following the pandemic (for instance, debt guarantees or loans *moratoria*).

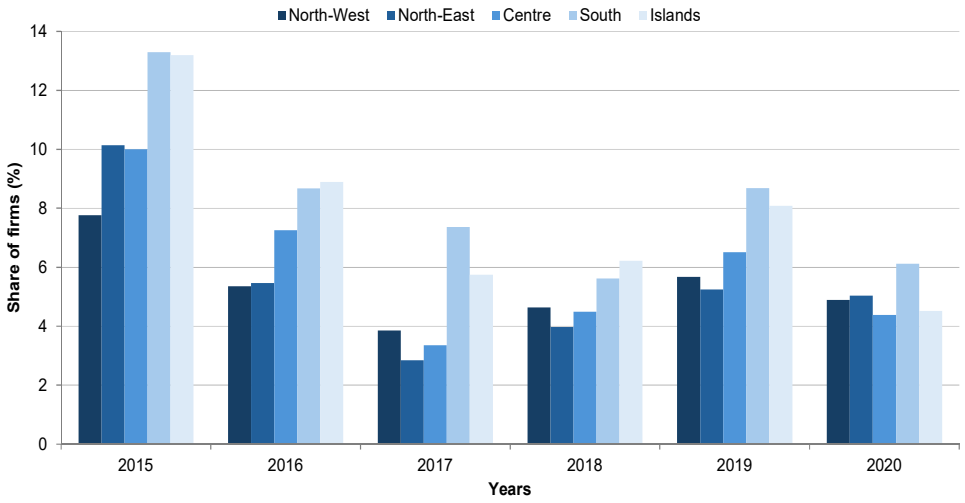
Figure 3.1 - Yearly share of firms reporting perceived credit constraints. Years 2015-2020



Source: Authors' elaborations on BCS-BR-CCs databases

Further investigating the yearly shares of firms reporting credit constraints, Figure 3.2 shows statistics by macroregion. While the yearly trends follow those reported in Figure 3.1, there seems to be considerable heterogeneity across Italian regions. Indeed, the Southern part of the country (South and Islands) has the highest share of constrained firms, while the North-West, North-East, and Centre regions display lower shares. This evidence seems in line with other studies pointing to more adverse financing conditions in less (financially) developed regions, as is the case for the South of Italy (Istat 2021).

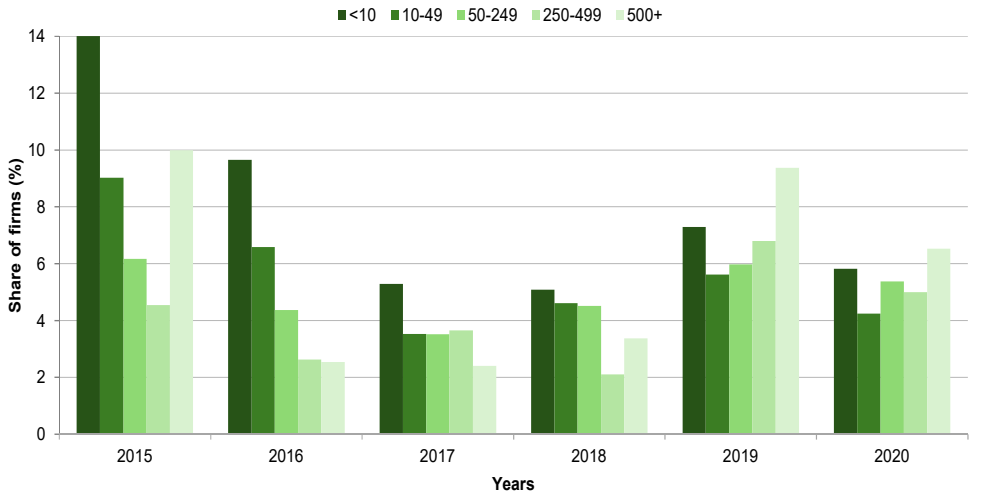
Figure 3.2 - Yearly share of firms reporting perceived credit constraints by macroregion. Years 2015-2020 (a)



Source: Authors' elaborations on BCS-BR-CCs databases
(a) Macroregion refers to the NUTS-1 regional classification.

As discussed in Section 1, Small and Medium Enterprises (SMEs) are usually the most affected by credit constraints. At least to some extent, this seems to be the case in Italy over the period considered, as shown in Figure 3.3. Indeed, there appears to be a negative relationship between perceived credit constraints and size for 2015-2018 (the years associated with a relatively calm business cycle period). For 2016 and 2017, the relation appears monotonically decreasing with size, while overall decreasing shares characterise 2015 and 2018 except for the 500+ class.

Figure 3.3 - Yearly share of firms reporting perceived credit constraints by firm size class. Years 2015-2020



Source: Authors' elaborations on BCS-BR-CCs databases

If one looks at the relation between perceived credit constraints and productivity[12] (Figure 3.4), the picture appears relatively more in line with other findings from the literature. Indeed, the share of firms reporting credit constraints appears higher for low productivity quantiles (especially the bottom 10% and 10%-30% of the productivity distribution). On the contrary, higher productivity quantiles seem on average associated with lower perceived constraints[13].

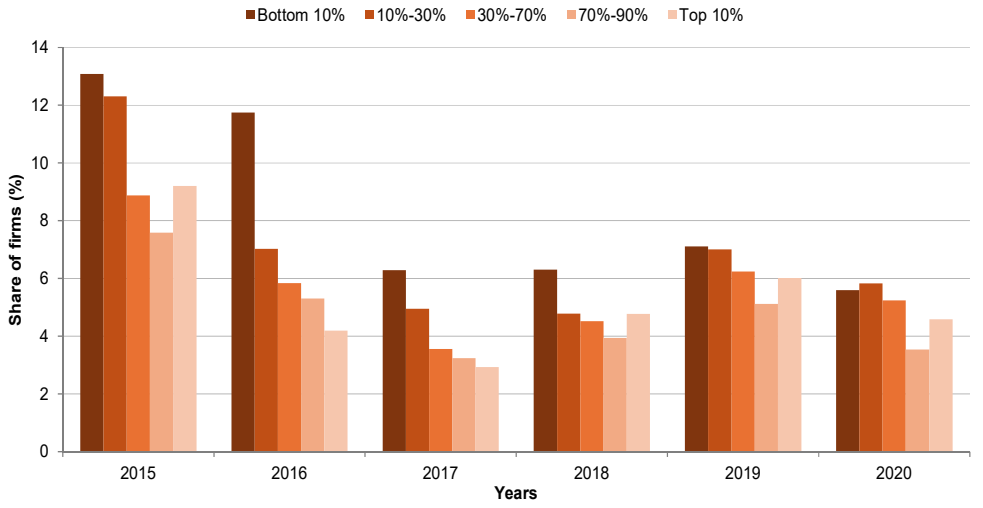
For the following analysis, we employ the above-mentioned variables (macroregion, size, and productivity) as well as a set of continuous financial indicators. In particular, to study the relations between perceived credit constraints and firm financial characteristics, we rely on a set of profitability (ROA, ROE), solvency (debt over assets), and liquidity (Current ratio) indicators. These may well be related to obstacles in access to credit. Indeed,

12 The nominal labour productivity variable is computed as value added over employees. Productivity classes are computed within sector-region (Figure 3.4).

13 For the top 10% productivity quantile, results show higher shares of firms' vis-à-vis, e.g. the 70%-90% quantile of the productivity distribution. This finding seems to align to the one presented in Figure 3.3, where very large firms (500+) appear to experience higher constraints vis-à-vis, e.g. large ones (250-500). These dynamics seem also to emerge during years in which, overall, shares of constrained firms are higher – i.e. in 2015, 2019, 2020 – possibly indicating specific non-monotonic relationships emerging across the business cycle. Nonetheless, it must be remarked that these dynamics are descriptive, and do not account for other relevant firm characteristics which may relate to perceived constraints (see Section 4 for the econometric analysis).

indicators such as ROA and ROE are key to measuring firm profitability. They account for the return of Net Income over Assets and Equity, respectively. Profitability measures should help capture, at least to some extent, firms' operational efficiency, e.g. in managing capital. Higher levels of such indicators should thus be related, in principle, to lower financing obstacles. For the debt indicator, we use measures instead of the ratio of the firm total debt and assets, proxying firms' financial structure. Firms significantly funded by debt – i.e. with a high debt ratio – may result riskier vis-à-vis firms with lower levels of debt per unit of assets, and thus likely experience higher obstacles in accessing external finance. Finally, liquidity measures – such as the Current ratio – are aimed at capturing the ability to pay current (short-term) liabilities (debts and payables) with current assets. Hence, the higher the current ratio, the more a firm is liquid – i.e. capable of paying its obligations without external financing.

Figure 3.4 - Yearly share of firms reporting perceived credit constraints by firm productivity quantile. Years 2015-2020 (a)



Source: Authors' elaborations on BCS-BR-CCs database
(a) Labour productivity is computed as value added per employee. Values are not deflated, while productivity classes are computed, yearly, within region-sector. Regions refer to the 20 Italian regions and sector refers to the 2-digit NACE Rev. 2 classification.

Table 3.1 shows descriptive statistics for such indicators, distinguishing among firms reporting or not reporting perceived credit constraints for the period 2015-2020 (Section 2.2). Notably, it appears that firms experiencing higher obstacles in accessing external finance are those with lower levels of liquidity (Current Ratio), higher debts (over assets), and lower profitability (as proxied by ROE and ROA indicators). These relations seem to hold across all the years considered in the analysis. Interestingly, average levels for the four indicators seem to follow a similar time pattern vis-à-vis the one reported in Figure 3.1 above.

Table 3.1 - Yearly average values of financial variables for constrained and unconstrained firms (a)

Years	Perceived credit constraints	Liquidity index (mean)	Debt index (mean)	ROE index (mean)	ROA index (mean)
2015	No	1.26	0.58	4.58	4.45
2015	Yes	1.14	0.64	-4.69	2.40
2016	No	1.33	0.56	6.45	5.14
2016	Yes	1.10	0.64	0.59	2.35
2017	No	1.31	0.56	7.70	5.53
2017	Yes	1.14	0.64	0.25	2.89
2018	No	1.20	0.56	6.11	5.19
2018	Yes	0.99	0.62	-0.88	2.10
2019	No	1.23	0.55	7.20	5.56
2019	Yes	1.00	0.63	-3.12	2.97
2020	No	1.36	0.51	4.25	3.95
2020	Yes	1.18	0.55	-0.49	2.05

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The variable 'perceived credit constraints' is equal to 1 (= Yes) if a firm is classified as credit-constrained (Section 2). Comparable yearly rankings across constrained and unconstrained firms are derived using median values for all variables considered. Similar results for profitability are used employing the Return On Investments (ROI) index and the Quick Ratio for liquidity.

4. Empirical strategy

In the previous subsection, we discussed a series of descriptive results about perceived firm credit constraints in Italy, over the period 2015-2020. Relying on the perceived credit constraint dummy indicator we derived in Section 2.2, results showed that the share of constrained firms tend to vary significantly across years, regions, and types of firms. Low productivity and, to some extent, small firms seem those experiencing higher obstacles in accessing external credit. In addition, constrained firms seem those with lower levels of profitability, liquidity, and higher leverage, on average. Finally, firms in Southern Italian regions appear those experiencing higher constraints vis-à-vis firms in the North and Centre of Italy (regardless of the year considered).

While this descriptive evidence may prove informative, results might depend on several other internal and external firm characteristics. For example, perceived credit constraints could be related to specific sectoral dynamics or to compositional effects along the size, productivity, and financial dimensions. It is thus useful to perform a regression analysis to account for such unobserved characteristics and control for potential compositional effects. To do that, we estimate the following linear probability equation:

$$CC_{i,t} = \alpha + \beta X_{i,t} + FE_{i,t} + \varepsilon_{i,t}$$

where $CC_{i,t}$ is the – annual, firm-level – perceived credit constraint dummy variable (presented in Section 2). $X_{i,t}$ is a set of controls including, according to different model specifications, firm characteristics – such as size and productivity classes – as well as the financial variables described above – profitability, liquidity, and solvency indicators (Section 3). $FE_{i,t}$ captures firm-level fixed effects – such as macroregion and industry characteristics – as well as annual fixed effects.

We estimate the model for the period 2015-2020, analysing the contemporaneous relation among firm characteristics and the perceived measure of credit constraints. Additional robustness versions are estimated through Logit regressions and excluding certain years (see subsection 5.1 and Appendix A). Benchmarking our results with the evidence emerging from the literature, the analysis acts as a test regarding the reliability and usefulness of the indicator.

5. Results

In this work, we aim to investigate the relationship between a measure of perceived credit constraints, on the one hand, and firm internal and external characteristics, on the other. Table 5.1 shows the estimation results of the linear probability model (presented in the previous Section) we employ to study such relationships. Table columns progressively include the control variables described above: firm size, productivity, profitability, solvency, and liquidity, as well as industry and regional characteristics[14].

Overall, the results align with the descriptive evidence presented in Section 3 and with the hypotheses emerging from the literature. Indeed, smaller firms appear to be suffering (reporting) higher difficulties in accessing external credit. Indeed, coefficients appear negative and significant for higher-size classes (vis-à-vis the reference class), indicating a lower likelihood of perceiving constraints for larger firms[15]. In particular, when accounting for financial[16] characteristics (models 6-11), the magnitude of coefficients seems overall increasing with size classes, i.e. the higher the size class, the lower the likelihood of experiencing credit constraints[17].

The same relationship seems to hold for firms located at the bottom of the productivity distribution. In particular, coefficients for more productive firms appear negative and significant, meaning that highly productive firms have lower probabilities of appearing constrained vis-à-vis low productivity firms[18]. As discussed in Section 1, the literature finds that Small and Medium Enterprises (SMEs), as well as low-productivity firms, are usually the most affected by credit constraints: a result that seems to be confirmed here. Indeed, it may be the case that small and low-productivity firms have less transparent track records, lower collaterals, and carry out activities which are more difficult to evaluate vis-à-vis larger firms, resulting in higher costs for external credit and, likely, higher perceived obstacles in accessing external finance.

14 Table A2 and Table A3 in Appendix A include results for other specifications of our indicator.

15 Results are confirmed using the size class 50-250 as reference as well as employing the continuous (log) employment variable.

16 Regressors are overall characterised by low cross-correlations (results available upon request).

17 For the size class 500+, the magnitude is slightly lower vis-à-vis, e.g. the 250-500 class for models 1-5, indicating a non-monotonic relationship among size classes and likelihood of perceiving constraints (the same pattern observed in Figure 3.3). Nonetheless, when accounting for other firm characteristics (e.g. model 10, 11), the relationship appears non-decreasing. See also additional results in Appendix A.

18 Results are confirmed using the class 30%-70% as reference class and the continuous (log) productivity variable. See also note 13 and Table 4.

Table 5.1 - Perceived credit constraints and firm characteristics: regression results for the period 2015-2020 (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Productivity class: 10%-30%	-0.00728	-0.00894		-0.0101	-0.0111	-0.0118	-0.0117	-0.00767	-0.0100	-0.0113	-0.00989
	(0.00767)	(0.00764)		(0.00764)	(0.00763)	(0.00766)	(0.00758)	(0.00764)	(0.00765)	(0.00763)	(0.00763)
Productivity class: 30%-70%	-0.0220***	-0.0239***		-0.0278***	-0.0270***	-0.0275***	-0.0271***	-0.0211***	-0.0251***	-0.0259***	-0.0237***
	(0.00714)	(0.00712)		(0.00711)	(0.00713)	(0.00716)	(0.00708)	(0.00716)	(0.00716)	(0.00714)	(0.00716)
Productivity class: 70%-90%	-0.0270***	-0.0276***		-0.0331***	-0.0300***	-0.0301***	-0.0321***	-0.0225***	-0.0274***	-0.0300***	-0.0271***
	(0.00741)	(0.00739)		(0.00738)	(0.00739)	(0.00743)	(0.00736)	(0.00743)	(0.00743)	(0.00744)	(0.00748)
Productivity class: Top 10%	-0.0196***	-0.0249***		-0.0286***	-0.0312***	-0.0314***	-0.0347***	-0.0234***	-0.0286***	-0.0326***	-0.0294***
	(0.00741)	(0.00745)		(0.00744)	(0.00747)	(0.00751)	(0.00746)	(0.00750)	(0.00751)	(0.00754)	(0.00757)
Size class: 10-50	-0.0221***	-0.0248***	-0.0264***		-0.0235***	-0.0237***	-0.0229***	-0.0222***	-0.0230***	-0.0224***	-0.0221***
	(0.00365)	(0.00399)	(0.00397)		(0.00399)	(0.00400)	(0.00398)	(0.00399)	(0.00399)	(0.00399)	(0.00399)
Size class: 50-250	-0.0273***	-0.0368***	-0.0403***		-0.0343***	-0.0348***	-0.0359***	-0.0345***	-0.0346***	-0.0360***	-0.0357***
	(0.00400)	(0.00472)	(0.00469)		(0.00471)	(0.00473)	(0.00470)	(0.00470)	(0.00471)	(0.00471)	(0.00471)
Size class: 250-500	-0.0422***	-0.0475***	-0.0502***		-0.0435***	-0.0434***	-0.0489***	-0.0446***	-0.0444***	-0.0488***	-0.0483***
	(0.00712)	(0.00755)	(0.00753)		(0.00755)	(0.00771)	(0.00754)	(0.00754)	(0.00756)	(0.00769)	(0.00768)
Size class: 500+	-0.0359***	-0.0452***	-0.0454***		-0.0434***	-0.0432***	-0.0496***	-0.0436***	-0.0440***	-0.0492***	-0.0483***
	(0.00794)	(0.00792)	(0.00793)		(0.00791)	(0.00814)	(0.00797)	(0.00791)	(0.00791)	(0.00819)	(0.00819)
Liquidity Index						-0.00172**				0.000175	0.000212
						(0.000724)				(0.000242)	(0.000242)
Debt Index							0.0814***			0.0795***	0.0727***
							(0.00664)			(0.00676)	(0.00692)
ROA Index								-0.00129***			-0.000840***
								(0.000150)			(0.000153)
ROE Index									-0.000193***	-0.000163***	
									(3.75e-05)	(3.76e-05)	
Observations	30,579	30,579	30,579	30,579	30,579	30,395	30,579	30,579	30,579	30,395	30,395
R-squared	0.009	0.025	0.024	0.022	0.027	0.027	0.033	0.029	0.028	0.034	0.034
Industry Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The Table shows results for the linear probability model described in Section 4, where the dependent variable is a dummy equal to 1 if the firm perceives credit constraints each year and 0 otherwise (Section 2.2).
The Table does not report year and macroregion coefficients. The complete list of coefficients is available in Table A1 in Appendix A. Missing size class and productivity class coefficients are not reported. Productivity classes are computed within Region-Sector. Regions refer to the 20 Italian regions while sectors refer to the 2-dig NACE Rev. 2 sectoral classification. Reference categories are Year = 2015, Size Class 1-9, and Productivity class 10%. Results are robust using the productivity class 30%-70% and size class 50-250 as reference classes and using the continuous log(size) and log(productivity) variables. Results are robust also using industry-region fixed effects (Table A4), excluding the years 2015 and 2020 (Table A5), and employing a Logit model (Table A6). Robust standard errors are in parentheses.

(b) *** p<0.01, ** p<0.05, * p<0.1.

Focussing on financial characteristics, firms with higher liquidity (model 6) and higher profitability (model 8, 9) are those experiencing lower constraints (with the other coefficients remaining significant). Conversely, firms with higher levels of debt (model 7) are associated to higher perceived credit

constraints. This may be because firms with higher liquidity can use internal resources more easily in the short run, not having to rely on external finance to fund their operations. Similarly, firms with higher profitability (ROA, ROE indicators) may instead be perceived as less risky by credit intermediaries, thus having lower obstacles (or costs) in accessing external credit[19]. On the contrary, firms that are more indebted may present higher risks, likely related to lower ability of sustaining the cost of debt and constraining access to external finance. However, if one simultaneously controls for all the above-mentioned financial characteristics (models 10, 11), the liquidity coefficient becomes not significant while solvency and profitability indicators do remain significant. This may point to the higher relevance of long-term measures (such as debts, equity and assets) vis-à-vis short-term ones for assessing credit risk.

The relationships commented on above hold controlling for year[20], industry and regional fixed effects (see the complete Table A 1 in Appendix A). Notably, taking the North-West NUTS-1 macroregion as a reference class, firms located in the Italian Mezzogiorno (South and Islands) appear more likely to perceive obstacles in accessing external credit (positive and significant coefficients). On the contrary, firms in the Centre and the North-East do not experience significantly lower constraints vis-à-vis the reference class. This figure may be related to the overall lower development of the credit and financial system in the Mezzogiorno[21].

5.1 Robustness checks, limitations, and future research

To ensure the robustness of our findings, we conducted several robustness checks. First, we tested alternative specifications of the perceived credit constraint indicator to perform a sensitivity analysis of the results. As explained in Section 2.2, we derive our primary perceived credit constraint indicator starting from quarterly data at the firm level. We categorise firms as credit-constrained in a given year if they report perceived obstacles in accessing external finance in more than half of the available quarters. To

19 This result holds also using the ROI indicator (results are available upon request).

20 Relative to 2015, year coefficients seem to capture the overall descriptive dynamics observed in Section 3 (Figure 3.1). Results are robust excluding the first (2015) and final (2020) years from the sample, i.e. focussing the analysis on the period 2016-2019 (Table A5).

21 The results are robust also controlling for Industry-Region fixed effects (Appendix A).

further test the robustness of our results, we derive two additional measures. Firstly, we categorise firms as credit-constrained if they report obstacles in accessing external credit for all quarters. Secondly, we categorise firms as credit-constrained if they have more than three-quarters available and report perceived obstacles more than half of the time[22]. As shown in Table A2 and Table A3 in Appendix A, the main findings are confirmed also using these additional specifications. Indeed, as commented in Section 5, smaller, less productive, and financially unhealthier firms result in those experiencing higher perceived constraints.

To evaluate the stability of the results, we also employed two additional model specifications, which again confirm the relationships described above. Employing a Logit model and deriving the marginal effects, we find the same significance levels and magnitudes for all relevant coefficients (Table A6 in Appendix A). We also find comparable results by specifying the usual linear probability model using the period 2016-2019 (Table A5). On the one hand, the Logit model allows testing the stability of results in light of potential limitations of linear probability models (e.g. predicted probabilities that fall outside the valid probability range of 0 to 1). On the other hand, the exclusion of the first (2015) and last year (2020) ensures that results are not driven by the pandemic year and/or by the less robust perceived credit constraint indicator derived for 2015 (for which only the fourth quarter is available - see Section 2.2).

Overall, the analysis proves robust to a series of robustness checks. However, it is important to remark that statistically significant relationships between variables are limited to correlations and do not establish causal relationships. While this study incorporates several firm controls to mitigate potential endogeneity concerns, the observed relationship between financial conditions and perceived credit constraints likely requires further investigation to avoid potential reverse causality issues. Future research may apply an IV approach and the increased availability of data on firms over multiple years to further assess those relationships. Despite these limitations, results are in line with the existing literature and reassure about the reliability of the derived perceived credit constraint indicator.

22 Hence, firms with three quarters available are classified as constrained if they report perceived obstacles in two or three of the quarters. Firms with four quarters available are classified as constrained if they report obstacles in in three or four of the quarters.

6. Conclusions

This work has analysed the relationship between credit constraints and firm characteristics in Italy. We have used qualitative firm-level quarterly information from the Istat's *Business Confidence Survey*, deriving an annual measure of perceived credit constraints for 2015-2020. Using a linear probability model, we have tested the indicator's informative power by relating it to firm financials and other firm characteristics from the Italian Business Register. In line with the existing literature, the analysis has highlighted that constraints seem more binding for smaller, less productive firms in Southern Italian regions. Relatedly, we have explored the relationship between the indicator and financial conditions at the firm level, finding that financially healthier firms experience lower credit access obstacles. In particular, firms with higher profitability seem less affected by credit constraints, while firms with higher levels of debt experience higher perceived obstacles in accessing external credit. The analysis brings novel empirical evidence about perceived measures of credit constraints in Italy over several years and provides a potentially useful indicator for firm-level empirical and policy analyses. In future research, the perceived measure of credit constraints can be used to examine how public policies influence credit access and perceived constraints and to investigate business dynamics over the COVID-19 pandemic.

Appendix A

Table A1 - Perceived credit constraints and firm characteristics: regression results for the period 2015-2020 (complete table) (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Year: 2016	-0.0323***	-0.0330***	-0.0322***	-0.0360***	-0.0336***	-0.0333***	-0.0316***	-0.0324***	-0.0330***	-0.0309***	-0.0308***
	(0.00550)	(0.00545)	(0.00546)	(0.00543)	(0.00545)	(0.00547)	(0.00543)	(0.00544)	(0.00544)	(0.00544)	(0.00545)
Year: 2017	-0.0571***	-0.0583***	-0.0582***	-0.0595***	-0.0585***	-0.0584***	-0.0568***	-0.0570***	-0.0578***	-0.0563***	-0.0560***
	(0.00548)	(0.00545)	(0.00545)	(0.00547)	(0.00544)	(0.00544)	(0.00542)	(0.00544)	(0.00544)	(0.00542)	(0.00542)
Year: 2018	-0.0507***	-0.0516***	-0.0513***	-0.0525***	-0.0527***	-0.0528***	-0.0508***	-0.0514***	-0.0522***	-0.0505***	-0.0503***
	(0.00547)	(0.00545)	(0.00545)	(0.00547)	(0.00545)	(0.00545)	(0.00543)	(0.00545)	(0.00544)	(0.00543)	(0.00543)
Year: 2019	-0.0343***	-0.0353***	-0.0350***	-0.0364***	-0.0362***	-0.0363***	-0.0340***	-0.0345***	-0.0356***	-0.0336***	-0.0332***
	(0.00573)	(0.00570)	(0.00570)	(0.00572)	(0.00570)	(0.00570)	(0.00568)	(0.00569)	(0.00569)	(0.00567)	(0.00568)
Year: 2020	-0.0462***	-0.0471***	-0.0468***	-0.0489***	-0.0473***	-0.0471***	-0.0415***	-0.0477***	-0.0472***	-0.0416***	-0.0425***
	(0.00563)	(0.00561)	(0.00561)	(0.00564)	(0.00561)	(0.00561)	(0.00560)	(0.00561)	(0.00561)	(0.00559)	(0.00560)
Productivity class: 10%-30%	-0.00728	-0.00894		-0.0101	-0.0111	-0.0118	-0.0117	-0.00767	-0.0100	-0.0113	-0.00989
	(0.00767)	(0.00764)		(0.00764)	(0.00763)	(0.00766)	(0.00758)	(0.00764)	(0.00765)	(0.00763)	(0.00763)
Productivity class: 30%-70%	-0.0220***	-0.0239***		-0.0278***	-0.0270***	-0.0275***	-0.0271***	-0.0211***	-0.0251***	-0.0259***	-0.0237***
	(0.00714)	(0.00712)		(0.00711)	(0.00713)	(0.00716)	(0.00708)	(0.00716)	(0.00716)	(0.00714)	(0.00716)
Productivity class: 70%-90%	-0.0270***	-0.0276***		-0.0331***	-0.0300***	-0.0301***	-0.0321***	-0.0225***	-0.0274***	-0.0300***	-0.0271***
	(0.00741)	(0.00739)		(0.00738)	(0.00739)	(0.00743)	(0.00736)	(0.00743)	(0.00743)	(0.00744)	(0.00748)
Productivity class: Top 10%	-0.0196***	-0.0249***		-0.0286***	-0.0312***	-0.0314***	-0.0347***	-0.0234***	-0.0286***	-0.0326***	-0.0294***
	(0.00741)	(0.00745)		(0.00744)	(0.00747)	(0.00751)	(0.00746)	(0.00750)	(0.00751)	(0.00754)	(0.00757)
Size class: 10-50	-0.0221***	-0.0248***	-0.0264***		-0.0235***	-0.0237***	-0.0229***	-0.0222***	-0.0230***	-0.0224***	-0.0221***
	(0.00365)	(0.00399)	(0.00397)		(0.00399)	(0.00400)	(0.00398)	(0.00399)	(0.00399)	(0.00399)	(0.00399)
Size class: 50-250	-0.0273***	-0.0368***	-0.0403***		-0.0343***	-0.0348***	-0.0359***	-0.0345***	-0.0346***	-0.0360***	-0.0357***
	(0.00400)	(0.00472)	(0.00469)		(0.00471)	(0.00473)	(0.00470)	(0.00470)	(0.00471)	(0.00471)	(0.00471)
Size class: 250-500	-0.0422***	-0.0475***	-0.0502***		-0.0435***	-0.0434***	-0.0489***	-0.0446***	-0.0444***	-0.0488***	-0.0483***
	(0.00712)	(0.00755)	(0.00753)		(0.00755)	(0.00771)	(0.00754)	(0.00754)	(0.00756)	(0.00769)	(0.00768)
Size class: 500+	-0.0359***	-0.0452***	-0.0454***		-0.0434***	-0.0432***	-0.0496***	-0.0436***	-0.0440***	-0.0492***	-0.0483***
	(0.00794)	(0.00792)	(0.00793)		(0.00791)	(0.00814)	(0.00797)	(0.00791)	(0.00791)	(0.00819)	(0.00819)
NUTS1: North-East					0.000571	0.000575	-8.61e-05	0.000603	0.000730	0.000193	0.000130
					(0.00329)	(0.00331)	(0.00329)	(0.00329)	(0.00329)	(0.00330)	(0.00330)
NUTS1: Centre					0.00562	0.00578	0.00307	0.00540	0.00577	0.00355	0.00350
					(0.00366)	(0.00368)	(0.00366)	(0.00366)	(0.00366)	(0.00367)	(0.00367)
NUTS1: South					0.0313***	0.0315***	0.0282***	0.0297***	0.0309***	0.0284***	0.0279***
					(0.00497)	(0.00499)	(0.00495)	(0.00495)	(0.00496)	(0.00497)	(0.00497)

Table A1 cont- - Perceived credit constraints and firm characteristics: regression results for the period 2015-2020 (complete table) (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
NUTS1: Islands					0.0274***	0.0276***	0.0250***	0.0249***	0.0270***	0.0249***	0.0238***
					(0.00808)	(0.00809)	(0.00802)	(0.00805)	(0.00805)	(0.00801)	(0.00802)
Liquidity Index						-0.00172**				0.000175	0.000212
						(0.000724)				(0.000242)	(0.000242)
Debt Index							0.0814***			0.0795***	0.0727***
							(0.00664)			(0.00676)	(0.00692)
ROA Index								-0.00129***			-0.000840***
								(0.000150)			(0.000153)
ROE Index									-0.000193***	-0.000163***	
									(3.75e-05)	(3.76e-05)	
Observations	30,579	30,579	30,579	30,579	30,579	30,395	30,579	30,579	30,579	30,395	30,395
R-squared	0.009	0.025	0.024	0.022	0.027	0.027	0.033	0.029	0.028	0.034	0.034
Industry Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DF	15	15	10	10	19	20	20	20	20	22	22
Adj. R2	0.00852	0.0219	0.0210	0.0192	0.0238	0.0242	0.0298	0.0264	0.0250	0.0307	0.0309

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The table shows results for the linear probability model described in Section 4, where the dependent variable is a dummy equal to 1 if the firm perceives credit constraints each year and 0 otherwise (Section 2.2). Missing size class and productivity class coefficients are not reported. Productivity classes are computed within Region-Sector. Regions refer to the 20 Italian regions while sectors refer to the 2-dig NACE Rev. 2 sectoral classification. Reference categories are Year = 2015, Size Class 1-9, and Productivity class 10%. Results are robust using the productivity class 30%-70% and size class 50-250 as reference classes and using the continuous log(size) and log(productivity) variables. Results are robust also using industry-region fixed effects (Table A4), excluding the years 2015 and 2020 (Table A5), and employing a Logit model (Table A6). Robust standard errors are in parentheses.

(b) *** p<0.01, ** p<0.05, * p<0.1

Table A2 - Alternative perceived credit constraint indicator (A) and firm characteristics: regression results (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Year: 2016	-0.0499***	-0.0507***	-0.0500***	-0.0528***	-0.0512***	-0.0505***	-0.0496***	-0.0503***	-0.0507***	-0.0486***	-0.0486***
	(0.00529)	(0.00525)	(0.00526)	(0.00524)	(0.00525)	(0.00527)	(0.00523)	(0.00525)	(0.00524)	(0.00525)	(0.00525)
Year: 2017	-0.0757***	-0.0769***	-0.0768***	-0.0777***	-0.0770***	-0.0770***	-0.0758***	-0.0760***	-0.0765***	-0.0754***	-0.0753***
	(0.00511)	(0.00510)	(0.00510)	(0.00512)	(0.00509)	(0.00509)	(0.00507)	(0.00509)	(0.00509)	(0.00507)	(0.00507)
Year: 2018	-0.0709***	-0.0719***	-0.0715***	-0.0725***	-0.0727***	-0.0728***	-0.0714***	-0.0719***	-0.0724***	-0.0711***	-0.0709***
	(0.00514)	(0.00513)	(0.00513)	(0.00515)	(0.00513)	(0.00514)	(0.00511)	(0.00513)	(0.00513)	(0.00511)	(0.00511)
Year: 2019	-0.0635***	-0.0645***	-0.0643***	-0.0653***	-0.0653***	-0.0653***	-0.0637***	-0.0641***	-0.0648***	-0.0633***	-0.0631***
	(0.00526)	(0.00525)	(0.00525)	(0.00527)	(0.00525)	(0.00525)	(0.00523)	(0.00525)	(0.00525)	(0.00523)	(0.00523)
Year: 2020	-0.0731***	-0.0741***	-0.0738***	-0.0754***	-0.0743***	-0.0742***	-0.0700***	-0.0746***	-0.0742***	-0.0701***	-0.0706***
	(0.00513)	(0.00512)	(0.00512)	(0.00514)	(0.00512)	(0.00512)	(0.00509)	(0.00511)	(0.00511)	(0.00509)	(0.00509)
Productivity class: 10%-30%	-0.0104	-0.0119*		-0.0128*	-0.0136**	-0.0139**	-0.0140**	-0.0112*	-0.0128*	-0.0135**	-0.0127*
	(0.00668)	(0.00667)		(0.00666)	(0.00667)	(0.00669)	(0.00663)	(0.00668)	(0.00668)	(0.00668)	(0.00668)
Productivity class: 30%-70%	-0.0232***	-0.0250***		-0.0277***	-0.0274***	-0.0275***	-0.0275***	-0.0233***	-0.0260***	-0.0263***	-0.0249***
	(0.00624)	(0.00625)		(0.00623)	(0.00626)	(0.00628)	(0.00622)	(0.00628)	(0.00628)	(0.00628)	(0.00629)
Productivity class: 70%-90%	-0.0245***	-0.0254***		-0.0293***	-0.0273***	-0.0272***	-0.0288***	-0.0220***	-0.0253***	-0.0271***	-0.0253***
	(0.00647)	(0.00646)		(0.00645)	(0.00647)	(0.00650)	(0.00645)	(0.00649)	(0.00650)	(0.00652)	(0.00654)
Productivity class: Top 10%	-0.0199***	-0.0244***		-0.0270***	-0.0293***	-0.0294***	-0.0319***	-0.0239***	-0.0273***	-0.0302***	-0.0282***
	(0.00647)	(0.00652)		(0.00649)	(0.00654)	(0.00657)	(0.00654)	(0.00657)	(0.00658)	(0.00661)	(0.00663)
Size class: 10-50	-0.0168***	-0.0177***	-0.0192***		-0.0167***	-0.0168***	-0.0163***	-0.0158***	-0.0163***	-0.0159***	-0.0157***
	(0.00306)	(0.00337)	(0.00336)		(0.00336)	(0.00337)	(0.00336)	(0.00337)	(0.00336)	(0.00336)	(0.00337)
Size class: 50-250	-0.0214***	-0.0264***	-0.0294***		-0.0245***	-0.0247***	-0.0257***	-0.0246***	-0.0247***	-0.0256***	-0.0254***
	(0.00332)	(0.00393)	(0.00391)		(0.00392)	(0.00394)	(0.00392)	(0.00391)	(0.00392)	(0.00393)	(0.00393)
Size class: 250-500	-0.0293***	-0.0319***	-0.0339***		-0.0287***	-0.0280***	-0.0327***	-0.0295***	-0.0294***	-0.0321***	-0.0317***
	(0.00610)	(0.00648)	(0.00646)		(0.00648)	(0.00668)	(0.00648)	(0.00648)	(0.00649)	(0.00667)	(0.00666)
Size class: 500+	-0.0272***	-0.0340***	-0.0341***		-0.0326***	-0.0316***	-0.0372***	-0.0328***	-0.0331***	-0.0362***	-0.0355***
	(0.00652)	(0.00649)	(0.00650)		(0.00648)	(0.00676)	(0.00653)	(0.00648)	(0.00649)	(0.00681)	(0.00680)
NUTS1: North-East					0.00219	0.00196	0.00171	0.00222	0.00231	0.00168	0.00162
					(0.00272)	(0.00273)	(0.00271)	(0.00272)	(0.00272)	(0.00273)	(0.00273)
NUTS1: Centre					0.00503*	0.00489	0.00315	0.00488	0.00515*	0.00322	0.00316
					(0.00301)	(0.00303)	(0.00301)	(0.00301)	(0.00301)	(0.00303)	(0.00303)
NUTS1: South					0.0250***	0.0249***	0.0227***	0.0239***	0.0247***	0.0225***	0.0223***
					(0.00417)	(0.00419)	(0.00416)	(0.00416)	(0.00417)	(0.00418)	(0.00418)

Table A2 cont. - Alternative perceived credit constraint indicator (A) and firm characteristics: regression results (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
NUTS1: Islands					0.0213***	0.0212***	0.0195***	0.0195***	0.0210***	0.0192***	0.0184***
					(0.00677)	(0.00679)	(0.00673)	(0.00676)	(0.00675)	(0.00672)	(0.00674)
Liquidity Index						-0.00103**				0.000403	0.000425
						(0.000448)				(0.000258)	(0.000267)
Debt Index							0.0601***			0.0597***	0.0553***
							(0.00560)			(0.00573)	(0.00582)
ROA Index								-0.000897***			-0.000569***
								(0.000124)			(0.000126)
ROE Index									-0.000147***	-0.000127***	
									(3.27e-05)	(3.28e-05)	
Observations	30,579	30,579	30,579	30,579	30,579	30,395	30,579	30,579	30,579	30,395	30,395
R-squared	0.018	0.029	0.028	0.027	0.031	0.031	0.036	0.033	0.032	0.037	0.037
Industry Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The table shows results for the linear probability model described in Section 4, where the dependent variable is a dummy equal to 1 if the firm perceives credit constraints each year and 0 otherwise. The indicator is in this case computed as equal to 1 if firms report obstacles in accessing external credit for all quarters (see Section 2.2 and 5.1 for additional details on the baseline indicator and additional versions). Missing size class and productivity class coefficients are not reported. Productivity classes are computed within Region-Sector. Regions refer to the 20 Italian regions while sectors refer to the 2-dig NACE Rev. 2 sectoral classification. Reference categories are Year = 2015, Size Class 1-9, and Productivity class 10%. Results are robust using the productivity class 30%-70% and size class 50-250 as reference classes and using the continuous log(size) and log(productivity) variables. Robust standard errors are in parentheses.

(b) *** p<0.01, ** p<0.05, * p<0.1.

Table A3 - Alternative perceived credit constraint indicator (B) and firm characteristics: regression results (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Year: 2017	-0.01000*	-0.0107*	-0.0106*	-0.00881	-0.0109*	-0.0111**	-0.0123**	-0.0110**	-0.0108*	-0.0119**	-0.0118**
	(0.00557)	(0.00556)	(0.00557)	(0.00543)	(0.00556)	(0.00558)	(0.00555)	(0.00555)	(0.00556)	(0.00558)	(0.00557)
Year: 2018	-0.0107**	-0.0105*	-0.0104*	-0.00858	-0.0116**	-0.0122**	-0.0127**	-0.0117**	-0.0118**	-0.0127**	-0.0125**
	(0.00543)	(0.00548)	(0.00549)	(0.00534)	(0.00549)	(0.00552)	(0.00549)	(0.00548)	(0.00549)	(0.00551)	(0.00551)
Year: 2019	0.00576	0.00585	0.00603	0.00753	0.00499	0.00451	0.00397	0.00512	0.00489	0.00410	0.00439
	(0.00584)	(0.00589)	(0.00589)	(0.00575)	(0.00588)	(0.00590)	(0.00587)	(0.00587)	(0.00587)	(0.00589)	(0.00589)
Year: 2020	-0.00373	-0.00379	-0.00346	-0.00240	-0.00421	-0.00363	-0.00261	-0.00563	-0.00463	-0.00275	-0.00352
	(0.00577)	(0.00577)	(0.00577)	(0.00563)	(0.00578)	(0.00580)	(0.00574)	(0.00578)	(0.00577)	(0.00576)	(0.00577)
Productivity class: 10%-30%	-0.00788	-0.00895		-0.00829	-0.0110	-0.0117	-0.0131	-0.00916	-0.0101	-0.0129	-0.0122
	(0.0115)	(0.0115)		(0.0114)	(0.0115)	(0.0115)	(0.0114)	(0.0115)	(0.0115)	(0.0114)	(0.0115)
Productivity class: 30%-70%	-0.0267**	-0.0278***		-0.0285***	-0.0310***	-0.0314***	-0.0327***	-0.0271**	-0.0295***	-0.0319***	-0.0304***
	(0.0108)	(0.0108)		(0.0107)	(0.0108)	(0.0108)	(0.0108)	(0.0108)	(0.0108)	(0.0108)	(0.0109)
Productivity class: 70%-90%	-0.0345***	-0.0352***		-0.0366***	-0.0382***	-0.0384***	-0.0412***	-0.0330***	-0.0361***	-0.0397***	-0.0376***
	(0.0110)	(0.0110)		(0.0109)	(0.0110)	(0.0110)	(0.0110)	(0.0111)	(0.0110)	(0.0110)	(0.0111)
Productivity class: Top 10%	-0.0202*	-0.0236**		-0.0241**	-0.0299***	-0.0301***	-0.0339***	-0.0246**	-0.0278**	-0.0322***	-0.0300***
	(0.0111)	(0.0111)		(0.0111)	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0113)
Size class: 10-50	-0.0119**	-0.0163***	-0.0178***		-0.0155***	-0.0167***	-0.0153***	-0.0146***	-0.0153***	-0.0154***	-0.0150***
	(0.00462)	(0.00522)	(0.00521)		(0.00522)	(0.00525)	(0.00522)	(0.00522)	(0.00521)	(0.00524)	(0.00525)
Size class: 50-250	-0.0112**	-0.0211***	-0.0247***		-0.0193***	-0.0211***	-0.0212***	-0.0194***	-0.0196***	-0.0213***	-0.0209***
	(0.00528)	(0.00628)	(0.00625)		(0.00626)	(0.00630)	(0.00625)	(0.00625)	(0.00626)	(0.00630)	(0.00629)
Size class: 250-500	-0.0242***	-0.0308***	-0.0331***		-0.0281***	-0.0317***	-0.0326***	-0.0291***	-0.0287***	-0.0339***	-0.0336***
	(0.00884)	(0.00953)	(0.00946)		(0.00951)	(0.00963)	(0.00951)	(0.00953)	(0.00953)	(0.00962)	(0.00961)
Size class: 500+	-0.0170*	-0.0292***	-0.0284***		-0.0288***	-0.0324***	-0.0348***	-0.0287***	-0.0292***	-0.0357***	-0.0347***
	(0.00989)	(0.00933)	(0.00934)		(0.00928)	(0.00927)	(0.00943)	(0.00928)	(0.00926)	(0.00934)	(0.00936)
NUTS1: North-East					-0.00577	-0.00500	-0.00601	-0.00578	-0.00574	-0.00535	-0.00537
					(0.00414)	(0.00415)	(0.00413)	(0.00414)	(0.00414)	(0.00414)	(0.00414)
NUTS1: Centre					-0.000618	0.000174	-0.00171	-0.000794	-0.000625	-0.000902	-0.000920
					(0.00470)	(0.00471)	(0.00469)	(0.00470)	(0.00470)	(0.00470)	(0.00471)
NUTS1: South					0.0267***	0.0270***	0.0246***	0.0254***	0.0263***	0.0251***	0.0247***
					(0.00669)	(0.00671)	(0.00667)	(0.00668)	(0.00669)	(0.00669)	(0.00669)

Table A3 cont. - Alternative perceived credit constraint indicator (B) and firm characteristics: regression results (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
NUTS1: Islands					0.0238**	0.0245**	0.0222**	0.0217**	0.0234**	0.0224**	0.0215**
					(0.0110)	(0.0110)	(0.0109)	(0.0109)	(0.0109)	(0.0109)	(0.0109)
Liquidity Index						-0.00563***				-0.00122	-0.00105
						(0.00118)				(0.00126)	(0.00126)
Debt Index							0.0558***			0.0504***	0.0453***
							(0.00876)			(0.00975)	(0.00994)
ROA Index								-0.000992***			-0.000671***
								(0.000186)			(0.000189)
ROE Index									-0.000147***	-0.000122**	
									(4.85e-05)	(4.85e-05)	
Observations	13,863	13,863	13,863	13,863	13,863	13,786	13,863	13,863	13,863	13,786	13,786
R-squared	0.004	0.020	0.018	0.018	0.022	0.024	0.026	0.024	0.023	0.027	0.027
Industry Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The table shows results for the linear probability model described in Section 4, where the dependent variable is a dummy equal to 1 if the firm perceives credit constraints each year and 0 otherwise. The indicator is in this case computed as equal to 1 if firms report obstacles in accessing external credit for more than half of the times and have more than three quarters available each year (see Section 2.2 and 5.1 for additional details on the baseline indicator and additional versions). Missing size class and productivity class coefficients are not reported. Productivity classes are computed within Region-Sector. Regions refer to the 20 Italian regions while sectors refer to the 2-dig NACE Rev. 2 sectoral classification. Reference categories are Year = 2015, Size Class 1-9, and Productivity class 10%. Results are robust using the productivity class 30%-70% and size class 50-250 as reference classes and using the continuous log(size) and log(productivity) variables. Robust standard errors are in parentheses.

(b) *** p<0.01, ** p<0.05, * p<0.1.

Table A4 - Perceived credit constraints and firm characteristics: regression results for the period 2015-2020
(additional fixed effects results) (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 11
Year: 2016	-0.0323***	-0.0330***	-0.0323***	-0.0366***	-0.0333***	-0.0330***	-0.0312***	-0.0321***	-0.0305***
	(0.00550)	(0.00545)	(0.00536)	(0.00532)	(0.00535)	(0.00537)	(0.00533)	(0.00535)	(0.00535)
Year: 2017	-0.0571***	-0.0583***	-0.0579***	-0.0591***	-0.0581***	-0.0580***	-0.0564***	-0.0566***	-0.0557***
	(0.00548)	(0.00545)	(0.00536)	(0.00538)	(0.00536)	(0.00536)	(0.00534)	(0.00535)	(0.00534)
Year: 2018	-0.0507***	-0.0516***	-0.0521***	-0.0535***	-0.0526***	-0.0527***	-0.0507***	-0.0514***	-0.0502***
	(0.00547)	(0.00545)	(0.00538)	(0.00540)	(0.00538)	(0.00539)	(0.00536)	(0.00538)	(0.00537)
Year: 2019	-0.0343***	-0.0353***	-0.0350***	-0.0366***	-0.0354***	-0.0355***	-0.0331***	-0.0339***	-0.0325***
	(0.00573)	(0.00570)	(0.00563)	(0.00565)	(0.00563)	(0.00563)	(0.00561)	(0.00563)	(0.00561)
Year: 2020	-0.0462***	-0.0471***	-0.0459***	-0.0480***	-0.0462***	-0.0460***	-0.0403***	-0.0467***	-0.0412***
	(0.00563)	(0.00561)	(0.00555)	(0.00557)	(0.00555)	(0.00555)	(0.00554)	(0.00555)	(0.00554)
Productivity class: 10%-30%	-0.00728	-0.00894		-0.0124	-0.0111	-0.0117	-0.0119	-0.00786	-0.0102
	(0.00767)	(0.00764)		(0.00766)	(0.00766)	(0.00769)	(0.00762)	(0.00767)	(0.00767)
Productivity class: 30%-70%	-0.0220***	-0.0239***		-0.0306***	-0.0269***	-0.0273***	-0.0272***	-0.0211***	-0.0239***
	(0.00714)	(0.00712)		(0.00716)	(0.00716)	(0.00719)	(0.00712)	(0.00719)	(0.00720)
Productivity class: 70%-90%	-0.0270***	-0.0276***		-0.0354***	-0.0303***	-0.0304***	-0.0326***	-0.0230***	-0.0279***
	(0.00741)	(0.00739)		(0.00744)	(0.00744)	(0.00748)	(0.00741)	(0.00749)	(0.00753)
Productivity class: Top 10%	-0.0196***	-0.0249***		-0.0358***	-0.0316***	-0.0315***	-0.0359***	-0.0235***	-0.0303***
	(0.00741)	(0.00745)		(0.00757)	(0.00759)	(0.00762)	(0.00759)	(0.00763)	(0.00772)
Size class: 10-50	-0.0221***	-0.0248***	-0.0255***		-0.0233***	-0.0235***	-0.0227***	-0.0222***	-0.0220***
	(0.00365)	(0.00399)	(0.00419)		(0.00421)	(0.00422)	(0.00420)	(0.00421)	(0.00420)
Size class: 50-250	-0.0273***	-0.0368***	-0.0379***		-0.0331***	-0.0336***	-0.0348***	-0.0334***	-0.0347***
	(0.00400)	(0.00472)	(0.00493)		(0.00497)	(0.00499)	(0.00496)	(0.00496)	(0.00497)
Size class: 250-500	-0.0422***	-0.0475***	-0.0457***		-0.0419***	-0.0420***	-0.0475***	-0.0432***	-0.0473***
	(0.00712)	(0.00755)	(0.00785)		(0.00787)	(0.00803)	(0.00787)	(0.00786)	(0.00802)
Size class: 500+	-0.0359***	-0.0452***	-0.0574***		-0.0568***	-0.0576***	-0.0624***	-0.0571***	-0.0621***
	(0.00794)	(0.00792)	(0.00854)		(0.00853)	(0.00876)	(0.00858)	(0.00853)	(0.00880)
Liquidity Index						-0.00191**			-4.18e-09
						(0.000769)			(0.000275)
Debt Index							0.0847***		0.0755***
							(0.00705)		(0.00735)
ROA Index								-0.00125***	-0.000771***
								(0.000157)	(0.000161)

Table A4 cont. - Perceived credit constraints and firm characteristics: regression results for the period 2015-2020 (additional fixed effects results) (a), (b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 11
Observations	30,579	30,579	30,579	30,579	30,579	30,395	30,579	30,579	30,395
R-squared	0.009	0.025	0.087	0.086	0.088	0.090	0.094	0.091	0.096
Industry Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The table shows results for the linear probability model described in Section 4, where the dependent variable is a dummy equal to 1 if the firm perceives credit constraints each year and 0 otherwise (Section 2.2). Missing size class and productivity class coefficients are not reported. Productivity classes are computed within Region-Sector. Regions refer to the 20 Italian regions while sectors refer to the 2-dig NACE Rev. 2 sectoral classification. Reference categories are Year = 2015, Size Class 1-9, and Productivity class 10%. Robust standard errors are in parentheses.

(b) *** p<0.01, ** p<0.05, * p<0.1.

Table A5 - Perceived credit constraints and firm characteristics: regression results for the period 2016-2019 (a),(b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Year: 2017	-0.0252***	-0.0255***	-0.0262***	-0.0234***	-0.0249***	-0.0251***	-0.0253***	-0.0246***	-0.0248***	-0.0253***	-0.0251***
	(0.00417)	(0.00416)	(0.00417)	(0.00408)	(0.00415)	(0.00417)	(0.00416)	(0.00415)	(0.00415)	(0.00416)	(0.00416)
Year: 2018	-0.0187***	-0.0189***	-0.0194***	-0.0165***	-0.0192***	-0.0196***	-0.0194***	-0.0192***	-0.0193***	-0.0196***	-0.0195***
	(0.00416)	(0.00414)	(0.00416)	(0.00407)	(0.00414)	(0.00417)	(0.00416)	(0.00414)	(0.00414)	(0.00416)	(0.00415)
Year: 2019	-0.00230	-0.00248	-0.00307	-0.000364	-0.00269	-0.00307	-0.00262	-0.00229	-0.00270	-0.00269	-0.00242
	(0.00451)	(0.00449)	(0.00450)	(0.00441)	(0.00449)	(0.00451)	(0.00449)	(0.00448)	(0.00448)	(0.00448)	(0.00449)
Productivity class: 10%-30%	-0.0129	-0.0146		-0.0150*	-0.0164*	-0.0174*	-0.0172*	-0.0132	-0.0154*	-0.0164*	-0.0151*
	(0.00891)	(0.00887)		(0.00888)	(0.00887)	(0.00892)	(0.00886)	(0.00887)	(0.00890)	(0.00888)	(0.00887)
Productivity class: 30%-70%	-0.0276***	-0.0299***		-0.0326***	-0.0327***	-0.0335***	-0.0328***	-0.0271***	-0.0309***	-0.0314***	-0.0292***
	(0.00832)	(0.00831)		(0.00830)	(0.00832)	(0.00837)	(0.00830)	(0.00833)	(0.00836)	(0.00834)	(0.00834)
Productivity class: 70%-90%	-0.0308***	-0.0319***		-0.0362***	-0.0341***	-0.0344***	-0.0359***	-0.0270***	-0.0316***	-0.0338***	-0.0310***
	(0.00863)	(0.00860)		(0.00861)	(0.00861)	(0.00867)	(0.00863)	(0.00863)	(0.00866)	(0.00868)	(0.00870)
Productivity class: Top 10%	-0.0256***	-0.0315***		-0.0343***	-0.0372***	-0.0376***	-0.0404***	-0.0300***	-0.0349***	-0.0384***	-0.0353***
	(0.00862)	(0.00868)		(0.00867)	(0.00869)	(0.00875)	(0.00873)	(0.00869)	(0.00873)	(0.00877)	(0.00878)
Size class: 10-50	-0.0178***	-0.0191***	-0.0208***		-0.0178***	-0.0180***	-0.0172***	-0.0165***	-0.0174***	-0.0169***	-0.0164***
	(0.00413)	(0.00450)	(0.00448)		(0.00450)	(0.00452)	(0.00450)	(0.00449)	(0.00450)	(0.00449)	(0.00449)
Size class: 50-250	-0.0231***	-0.0300***	-0.0337***		-0.0275***	-0.0278***	-0.0286***	-0.0275***	-0.0277***	-0.0289***	-0.0286***
	(0.00455)	(0.00537)	(0.00534)		(0.00535)	(0.00539)	(0.00536)	(0.00534)	(0.00535)	(0.00536)	(0.00536)
Size class: 250-500	-0.0409***	-0.0435***	-0.0465***		-0.0392***	-0.0390***	-0.0420***	-0.0399***	-0.0400***	-0.0426***	-0.0420***
	(0.00777)	(0.00826)	(0.00826)		(0.00827)	(0.00847)	(0.00843)	(0.00825)	(0.00827)	(0.00843)	(0.00843)
Size class: 500+	-0.0389***	-0.0459***	-0.0464***		-0.0434***	-0.0432***	-0.0471***	-0.0437***	-0.0438***	-0.0475***	-0.0468***
	(0.00822)	(0.00827)	(0.00828)		(0.00826)	(0.00851)	(0.00856)	(0.00826)	(0.00825)	(0.00856)	(0.00856)
NUTS1: North-East					-0.00384	-0.00385	-0.00419	-0.00366	-0.00374	-0.00412	-0.00404
					(0.00369)	(0.00371)	(0.00370)	(0.00368)	(0.00368)	(0.00370)	(0.00369)
NUTS1: Centre					0.00454	0.00478	0.00258	0.00430	0.00464	0.00271	0.00269
					(0.00420)	(0.00422)	(0.00421)	(0.00420)	(0.00420)	(0.00421)	(0.00421)
NUTS1: South					0.0293***	0.0296***	0.0270***	0.0274***	0.0290***	0.0267***	0.0260***
					(0.00566)	(0.00569)	(0.00567)	(0.00565)	(0.00565)	(0.00566)	(0.00567)
NUTS1: Islands					0.0269***	0.0272***	0.0249***	0.0235***	0.0263***	0.0244***	0.0229**
					(0.00913)	(0.00915)	(0.00909)	(0.00909)	(0.00910)	(0.00906)	(0.00907)
Liquidity Index						-0.00183**				2.85e-05	7.10e-05
						(0.000906)				(0.000293)	(0.000288)

Table A5 cont. - Perceived credit constraints and firm characteristics: regression results for the period 2016-2019 (a),(b)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Debt Index							0.0808***			0.0781***	0.0705***
							(0.00772)			(0.00768)	(0.00787)
ROA Index								-0.00132***			-0.000875***
								(0.000171)			(0.000176)
ROE Index									-0.000180***	-0.000152***	
									(4.39e-05)	(4.39e-05)	
Observations	21,927	21,927	21,927	21,927	21,927	21,743	21,743	21,927	21,927	21,743	21,743
R-squared	0.006	0.023	0.021	0.020	0.025	0.026	0.032	0.028	0.026	0.032	0.033
Industry Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The table shows results for the linear probability model described in Section 4, where the dependent variable is a dummy equal to 1 if the firm perceives credit constraints each year and 0 otherwise (see Section 2.2), over the period 2016-2019. Missing size class and productivity class coefficients are not reported. Productivity classes are computed within Region-Sector. Regions refer to the 20 Italian regions while sectors refer to the 2-dig NACE Rev. 2 sectoral classification. Reference categories are Year = 2015, Size Class 1-9, and Productivity class 10%. Robust standard errors are in parentheses.

(b) *** p<0.01, ** p<0.05, * p<0.1.

Table A6 - Perceived credit constraints and firm characteristics: regression results for the period 2015-2020 (Logit model) (a), (b)

VARIABLES	Logit Model (LM)	LM - Marginal Eff.
Year: 2016	-0.457***	-0.033***
	(0.0745)	(0.006)
Year: 2017	-0.966***	-0.057***
	(0.0954)	(0.006)
Year: 2018	-0.816***	-0.051***
	(0.0871)	(0.006)
Year: 2019	-0.464***	-0.033***
	(0.0805)	(0.006)
Year: 2020	-0.659***	-0.044***
	(0.0887)	(0.006)
Productivity class: 10%-30%	-0.156	-0.011
	(0.114)	(0.008)
Productivity class: 30%-70%	-0.391***	-0.025***
	(0.110)	(0.008)
Productivity class: 70%-90%	-0.456***	-0.028***
	(0.121)	(0.008)
Productivity class: Top 10%	-0.491***	-0.030***
	(0.119)	(0.008)
Size class: 10-50	-0.334***	-0.021***
	(0.0664)	(0.004)
Size class: 50-250	-0.556***	-0.032***
	(0.0828)	(0.005)
Size class: 250-500	-0.850***	-0.044***
	(0.196)	(0.008)
Size class: 500+	-0.802***	-0.042***
	(0.183)	(0.007)
Debt Index	1.139***	0.063***
	(0.117)	(0.007)
Liquidity Index	-0.00531	-0.000
	(0.00672)	(0.000)
ROA Index	-0.0128***	-0.001***
	(0.00227)	(0.000)
NUTS1: North-East		0.001
		(0.003)
NUTS1: Centre		0.004
		(0.004)
NUTS1: South		0.030***
		(0.005)
NUTS1: Islands		0.026***
		(0.009)
Observations	29,277	29,277
Industry Fixed Effects	Yes	
Pseudo R2	0.0720	

Source: Authors' elaborations on BCS-BR-CCs databases

(a) The table shows results for a Logit model where the dependent variable is a dummy equal to 1 if the firm perceives credit constraints each year and 0 otherwise (Section 2.2). Control variables are those employed in the baseline linear probability model (Section 4 and Table A1). Reference categories are Year = 2015, Size Class 1-9, and Productivity class 10%. Missing size class and productivity class coefficients are not reported. Productivity classes are computed within Region-Sector. Regions refer to the 20 Italian regions while sectors refer to the 2-dig NACE Rev. 2 sectoral classification. Omitted 2-dig FE and macro region FE for LM column and 2-dig FE for Marginal Eff. column. Robust standard errors are in parentheses.

(b) *** p<0.01, ** p<0.05, * p<0.1.

Appendix B - CBS Questionnaire

Q.43. Nowadays, according to you, the conditions for accessing bank credit are more favourable or less favourable compared to those of 3 months ago?
1. More favourable.
2. Constants.
3. Less favourable.
4. Unknown.

Q.44. This judgment stems from your recent direct contacts with banks or financial companies for request/increase the credit of your company or is it just a conviction not linked to specific contacts with banks?
1. It arises from contacts with banks.
2. Independent belief in contacts with banks.

(Only if code 1 to question 44)

Q.45 Have you obtained the credit you requested from the bank or financial company you turned to?
1. Yes, under the same conditions.
2. Yes, but on more expensive terms.
3. No.
4. I had only been to the bank to ask for information.

(Only if code 3 to question 45)

Q.46 The bank or the financial institution did not want to grant /increase the requested credit or you have not accepted the conditions that the bank imposed to grant you the credit (conditions too onerous: interest rates, guarantees, etc.)?
1. The bank did not grant /increase the credit.
2. We have not accepted the conditions that the bank asked for, as it was too expensive.

(Only if code 2 to question 45)

Q.47 What were the main reasons for the aggravation of conditions? (Maximum three answers)

1. Higher rate.
2. More personal guarantees (surety, other contractual obligations).
3. Multiple collateral (physical or financial assets).
4. Limitations for credits granted.
5. Costs (commissions, ancillary costs).

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