Article

How Local Finance and Enforcement Shaped SME Credit Choices before and during the COVID Crisis

Francesco Fasano [1,*], Maurizio La Rocca [1], F. Javier Sánchez-Vidal [2], Maria Josephin Lio [1] and Alfio Cariola [1]

[1] Department of Business Administration and Law, University of Calabria, 87036 Rende, Italy; m.larocca@unical.it (M.L.R.); mariajosephin.lio@gmail.com (M.J.L.); a.cariola@unical.it (A.C.)

[2] Departamento de Economía, Contabilidad y Finanzas, Facultad de Ciencias Empresariales, Universidad Politécnica de Cartagena, 30201 Cartagena, Spain; javier.sanchez@upct.es

[*] Correspondence: francesco.fasano@unical.it

Abstract: Credit from suppliers is an important source of finance for firms. It can sustain firms' financial flexibility even in periods of downturn. In this study, using a large database of 90,763 Italian firms in the 2015–2021 period, we investigated how local financial development affects the trade-credit policies of SMEs and how this effect is conditioned by the degree of judicial enforcement. Given that trade credit can be a substitute for bank financing, we find that firms make more use of trade credit in developed financial markets. Moreover, we highlight the finding that a higher degree of judicial enforcement, which reinforces the role of contracts in the market, amplifies this effect. Finally, we observe that the COVID-19 crisis has reduced both the positive effect of local financial development and the positive moderating effect of enforcement in the use of trade credit.

Keywords: financial development; judicial enforcement; trade credit; COVID crisis

1. Introduction

This study builds on the ideas presented by Petersen and Rajan (1997) and Fisman and Love (2003) regarding the substitutability of trade credit and bank loans. They suggest that informal financing, especially trade credit, exists as a substitute for formal financing when it comes to bank financing wherever conventional financial institutions are poorly developed; when bank credit is rationed, trade credit could serve as a substitute, i.e., as a second-best alternative to bank financing. Firms in countries with less-developed financial systems appear to substitute bank credit with trade credit provided by their suppliers to finance growth. However, a different perspective can also be taken. As suggested by Demirguc-Kunt and Maksimovic (2001), there could be a complementary view indicating that the development of informal credit arrangements between firms (trade credit) is complementary to the development of a financial system. They have found that non-financial firms, which have a comparative advantage in exploiting informal means of ensuring that their borrowers repay loans, act as financial intermediaries who provide trade credit in a manner parallel to a financial sector that already specializes in the provision of capital. They showed empirically that firms in countries with a well-developed banking system borrow more on credit from their suppliers and lend more to their customers. Given that firms need to obtain external financing from financial intermediaries to channel funds from financial institutions, it is valuable to have a well-developed financial system.

Within this theoretical framework, we would like to investigate trade-credit policy as a non-formal financial channel, depending on the extent to which the local area where a firm is based is financially developed. In this respect, two forces can play an important role. First, the effectiveness of judicial enforcement could explain the differences in financial development between countries (La Porta et al. 1997). In other words, if local financial development affects the trade-credit decisions of firms and judicial enforcement affects local financial development, it would be of interest to investigate the moderating role

that the effectiveness of the judicial system has on the main relationship we are studying. Second, we have investigated how the recent COVID-19 crisis could have impacted this. The COVID-19 pandemic has spurred the emergence of literature exploring its effects in various aspects of business. In response to the significant impact produced by the pandemic, governments and central banks globally have enacted a wide range of fiscal measures (Benmelech and Tzur-Ilan 2020) and monetary strategies (Cortes et al. 2022; Hartley et al. 2021) that seek to alleviate the economic challenges produced by this public health crisis. The surplus liquidity resulting from the ECB's monetary easing has had a notable impact on Italian financial markets, as noted by Cortes et al. in 2022.

Notably, the study conducted by Iyer and Simkins in 2022 delves into the economic repercussions of the COVID-19 crisis, highlighting the pivotal role governments played in responding to the emergency. These impacts were likely shaped by government incentives, which played a significant role in supporting businesses during the COVID-19 crisis, as indicated by Tarkom in 2021. In a similar vein, both Tarkom (2021) and Iyer and Simkins (2022) have recently focused their attention on the influence that government incentives had on businesses during the coronavirus emergency. In the context of Italy, which experienced a stringent lockdown due to the pandemic (Erdem 2020), the government introduced many decrees to assist companies in navigating this unprecedented situation and to sustain their operations (Fasano et al. 2022). As Italy found itself among the nations impacted by the pandemic's first wave, the economic policy measures implemented by the ECB and public health measures like lockdowns were of particular significance. The Italian government adopted an exceptionally forceful approach with its fiscal policies. Italy unveiled an extensive government guarantee program. These guarantees impacted the banking sector through various mechanisms (Dantas et al. 2023), and increased government deficits influenced the real economy due to their impact on fiscal multipliers (Silva 2021). Therefore, both fiscal and monetary policies have exerted an influence on both the banking and non-banking sectors in Italy. Consequently, the availability of bank credit and trade credit has been influenced.

Thus, our research questions are the following: In a country (Italy) that has been unified for a long time and that has the same legal system, how do differences in the level of financial development at a local level affect the way firms support their growth through non-formal financing channels (trade credit)? Do differences in the effectiveness of the local legal system affect this relationship? Can non-formal financing channels substitute for formal financial systems when financial development is low? How have these effects varied during the pandemic? Studying trade-credit decisions during the COVID-19 crisis is very important, as highlighted by Zimon and Dankiewicz (2020). Italy is a bank-based country, where the stock market is underdeveloped, and there are very few financial devices available for firm financing. In a country where the industrial structure is fundamentally based on small- and medium-sized firms (SMEs) indeed, more than 95 percent of firms are SMEs–the local context is fundamental for firm activities. In particular, the local financial system plays a central role for firms. Therefore, it is possible to assume that, especially in an area with poor financial development, support from non-formal financial channels could be extremely significant for firms. The results of our analysis show that local financial development has a positive impact on the use of trade credit by firms and that this effect is extended in the presence of well-developed legal systems. During the period of the COVID crisis, both the main effect and the moderation effect have been mitigated by the pandemic.

The rest of the paper is structured as follows: In Section 2, our research hypotheses are developed. Section 3 presents the Italian context of the research, Section 4 reports on the sample, model and variables, Section 5 shows the empirical results and, finally, Section 6 concludes and provides some implications.

2. Literature Review and Research Hypotheses

2.1. The Effect of Local Financial Development on Trade Credit

Empirically, there is limited evidence of the role of the local financial development on trade-credit policy, with studies being mainly based on cross-country analysis. Previous

studies on developing countries provide evidence of the use of trade credit as a substitute for bank support (Fasano and Deloof 2021). According to Fisman and Love (2003), trade credit can substitute for bank loans in countries with poor financial institutions. In an analysis focused on China, Ge and Qiu (2007) found a higher demand for trade credit from financially constrained firms in response to limited access to bank credit. It is possible that the Chinese economy grew very quickly, despite its underdeveloped financial systems and institutions, due to the existence of alternative mechanisms and institutions that play an important role in supporting its growth, acting as financing channels (Allen et al. 2005). In particular, small firms that have limited access to credit from financial institutions tend to use more trade credit as an alternative financing channel, being a source of "financing of last resort" by very constrained firms (Petersen and Rajan 1997).

Compared with the results of Ge and Qiu (2007), Ayyagari et al. (2008), in an analysis at a provincial level but still based on China, found that firms tend to growth faster when they obtain bank credit compared with alternative informal finance, despite the weakness of the bank system. Ayyagari et al. (2008) found no evidence that alternative financing channels are associated with higher growth, showing that all firms, irrespective of size, benefit from access to formal finance and suggesting that alternative informal financing devices are not a substitute for formal mechanisms. Thus, private sector firms that have loans from the formal sector (banks) perform better than other firms, and having a better developed financial system brings more benefits. Also, Cull et al. (2007) found that, despite an inefficient banking system, trade credit does not play an economically significant role in China[1].

The literature provides controversial evidence within the same context of analysis, (e.g., Ge and Qiu 2007 compared with Ayyagari et al. (2008)) which can be biased by the lack of the due consideration of the differences that exists among areas at local level. This issue deserves more in-depth investigation. Indeed, the characteristics of the local context may exert a crucial role in corporate decisions, providing distorted investment incentives, modifying market expectations, disciplining management, and increasing financial constraints on firms' growth.

There is increasing evidence in the finance literature that the local context is relevant. Well-known financial papers (Degryse and Ongena 2005; Petersen and Rajan 2002) highlight the importance of distance in explaining the firm's financing. Studies on the local context with the aim of understanding firms' financing across different regional contexts are also similar to contemporary debates in the economic geography literature (Martin 1999). Pollard (2003) suggests the need to contextualize firm finance, analyzing how different geographical configurations of financial institutions affect the access to credit for firms operating locally. In general, it is suggested that banks operating locally have more knowledge and control of local firms and entrepreneurs (Alessandrini and Zazzaro 1999). Furthermore, the regional economics literature has considered similar arguments, although with a distinctive approach, typically based on aggregate analysis related to the regional impact of monetary policy. Enterprises, and especially SMEs, are considered to experience important regional differences in credit conditions (Dow and Montagnoli 2007). Niskanen and Niskanen (2006) found very important differences at the provincial level in trade-credit policy. They conclude that, due to differences in banks competition, firms operating in urban areas provide and use significantly more trade credit as a source of funding than firms operating in rural provinces.

The above discussion shows that the effects of local financial development on firms' financing have been investigated across various fields of research from different analytical perspectives.

Considering that firms have a variety of choices, opportunities and constraints according to the geographic context in which they are embedded, analyzing the role of local financial development on trade choices can provide relevant insights. Thus, moving this idea from a cross-country analysis to a local level, firms could offset the presence of formal financial channel constraints in the local area, derived by inefficiency of the local financial

system, by the use of non-formal financial channels (trade credit) or, alternatively, a better-developed local financial system can promote the use of trade credit, which leads to our first hypothesis:

H1. *Local financial development has a positive effect on trade credit.*

2.2. The Role of Enforcement in Affecting the Link between Local Financial Development and Trade Credit

The effectiveness of financial institutions is often impacted by other influential institutional actors in the market. Although based on a different perspective, Clay (1997) observed the growing interest in understanding the role that institutions have jointly played in a variety of settings, because little is known about the effects that institutions have on each other. Specifically, the effectiveness of the law is a possible relevant factor that promotes financial development. In addition to the function performed by the financial system, burgeoning literature accounts also for the role of judicial enforcement in shaping the operation of a financial system, thereby indirectly influencing trade decisions[2]. Unlike credit from financial institutions, trade credit does not rely directly on the level of efficiency of the judicial system and on contract enforcement by law. In particular, the law and finance theories focus on the role of legal institutions and enforcement in explaining international differences in financial development (La Porta et al. 1997, 1998; Beck and Levine 2004). Judicial enforcement plays a significant role, as the regulations governing the financial system work in the interest of investors, protecting creditors only to the extent that the rules are actually enforced. Due to the risk of default and the difficulty in recouping the liquidation value of the collateral, enforcement affects the ex-ante availability of agents to provide finance. As suggested by La Porta et al. (1998), because a good legal environment protects potential financiers against expropriation by entrepreneurs, it raises their willingness to provide funds to firms. Thus, some contributions (i.e., Utrero-González 2007; Giannetti 2003) suggest that, by fostering financial market development, enforcement and investors' protection work together to alleviate agency problems.

The role of legal institutions and enforcement in explaining international differences in how financial development affects countries (Beck and Levine 2004) can also apply with regards to within-country analyses; the efficiency of the courts at the local level can be different although the same law applies. By providing diverse levels of creditor protections, the existence of differences in the quality of the enforcement at local level affects the influence of the local financial development. As suggested by the law and finance view, local financial development would be more beneficial where judicial enforcement is more effective, while the financial support to firms would be lower where the quality of the legal system is weaker. Therefore, across different provincial areas, a more efficient enforcement system, leading to better outcomes for the financial system, should amplify the impact of local financial development on the use of SMEs' trade credit. Thus, we expect that the higher the local judicial efficiency, the higher the impact of local financial development on trade credit.

H2. *The effect of local financial development on trade credit is positively moderated by judicial enforcement.*

2.3. The Role of Enforcement on the Relationship between Local Financial Development and Trade Credit during the COVID Period

The advent of COVID-19 has led to a surge in the development of a new stream of literature (e.g., Hu and Zhang 2021; Bose et al. 2021; Chen et al. 2021). For example, Carter et al. (2022), Tchuigoua et al. (2022), Hsu and Yang (2022) and Kumar and Zbib (2022), among others, have recently examined the consequences of the COVID-19 pandemic on firms from different viewpoints.

Companies may become worried in a climate of uncertainty as a result of the increase in equity capital costs brought on by the pandemic (Ke 2022). Due to a substantial worsening

in the profitability–risk relationship, listed company stock prices fell dramatically during the early months of 2020, demonstrating the depth of the crisis (Neukirchen et al. 2022).

Other studies also investigated the role of institutions during the downturn (e.g., Fasano et al. 2022; Minh and Ngoc 2021). In this context, some works examine the impact of monetary authority methods or government policies during the recession (e.g., Chen and Yeh 2021; Fendel et al. 2021). Globally, governments and central banks responded with fiscal and monetary measures to mitigate economic challenges caused by the crisis. Studies by Iyer and Simkins (2022) and Tarkom (2021) emphasize the role of government incentives in supporting businesses. The paper of Iyer and Simkins (2022), for instance, examines the economic effects of COVID-19 by investigating the role of governments in the crisis' solution. These studies underscore the importance of considering how institutions' roles could evolve during a pandemic. In Italy, which faced an early and severe pandemic wave, the government implemented measures like lockdowns and financial support decrees (Erdem 2020; Fasano et al. 2022). Italy also introduced a substantial government guarantee program, affecting both the banking sector (Dantas et al. 2023) and the real economy through fiscal stimuli (Silva 2021). In this context, considering the disruptive advent of the pandemic, we scrutinize the impact of the COVID-19 crisis on the relation of local financial development on trade credit and on the moderating role of enforcement. The downturn caused strong negative effects on the whole economy, for which a well-developed financial system could then, in comparison, be less influential on trade-credit decisions, and firms might hesitate to offer trade credit to one another. The economic downturn made companies cautious, diminishing the impact of a robust financial system on trade-credit decisions. During crises, firms prioritize financial stability. Those with access to financial debt might reduce risks by limiting trade credit, even if they had previously granted it, to safeguard their financial health. This suggests that the impact of local financial development on trade credit could have diminished during the COVID-19 period.

At the same time, the lower number of financial and commercial transactions that take place in the markets in times of recession require less intervention by institutions to protect these contractual relationships. For these reasons, the moderating role of enforcement may also have had less relevance during the period of the COVID-19 crisis. Thus, the magnitude of the moderating effect could be lower during the downturn. All these arguments lead to the development of our third hypothesis.

H3a. *The effect of local financial development on trade credit was lower during the COVID-19 period.*

H3b. *The moderating role of judicial enforcement was lower during the COVID-19 period.*

3. The Italian Context
3.1. Banking System

Italy's financial system is predominantly bank-based (Benfratello et al. 2008). Its stock market is relatively undeveloped compared not only with the US ones but also, to some extent, with those of other large European countries, playing a very limited role in providing external finance to firms at any stage of their life cycle. Very few Italian companies trade publicly, not even companies that are quite large (e.g., Ferrero, Fininvest, Barilla)[3].

Historically the Italian banking system was state-owned, heavily regulated and barely competitive. Up until the early 1990s, the main features of the banking industry were the result of a regulation introduced in 1936 to avoid banking instability through severe restrictions on competition. Many limitations were laid down on banks' activity—among which was the total control upon entry and exit into the industry as well as on branching decisions, with severe limitations on opening new banks or bank branches.

The radical regulatory reform initiated in 1990 transformed the scenario described above (see Costi (2007) for more details on this narrative). Primed by the new legislative framework, the selling-off of state-held banking shares, large consolidation waves and

a rapid growth in the number of branches transformed the physiognomy of the Italian banking sector (Colombo and Turati 2004). The restructuring process started in the nineties led to a positive increase in the system's overall efficiency[4] as well as to a rise in competition[5], enhanced both the solidity and profitability of Italy's credit institutions that are attributed to persistent cost monitoring and an expanded range of services offered to clients in terms of quality, quantity and conditions applied, starting from the significant increase in the number of branches and the increased presence of banks in areas where they were under-represented[6].

From 1990 to 2006, 444 mergers and 205 acquisitions among Italian credit institutions (excluding operations that involved the same bank more than once) were completed. In the same period, the number of banks operating in the country dropped from 1064 to 793, whereas the number of bank branches were boosted from 17,721 to 32,337 (according to the Bank of Italy Annual Reports, 1991–2007). Focusing on the geographical expansion of banks following the deregulation process, Benfratello et al. (2008) show that branch density at the provincial level (i) has increased largely, on average; (ii) is characterized by a large interprovincial dispersion that has been increasing with time; and (iii) displays much more variation between provinces than over time. Moreover, the banks' geographical expansion and consolidation activities led to a significant variation in banking concentration across the Italian provinces, which characterizes almost all the regions as well as all the macro-areas of the country (see also FinMonitor 2006). Thus mergers and acquisitions determined a concentration of the national banking market, with a noteworthy reduction in the number of banks jointly with an increase in the number of bank branches in the local market (Gobbi 2005)[7].

Taking into account the aforementioned details, it is evident that the transformations in the Italian banking sector during the last two decades have increased heterogeneity in the structure of credit markets, making the Italian experience a valuable scenario to conduct empirical studies on the implications that the degree of local banking development might have, for instance, on firms' trade and financial decisions.

In the last two decades, there has been a good deal of interest in analyzing how the aforementioned changes in the financial system scenario could have influenced the business ecosystem in Italy. Angelini and Cetorelli (2003) studied the effect of regulatory reform on banks' mark-ups. Bonaccorsi di Patti and Gobbi (2001) investigated the effect of competition on the availability of credit. Bonaccorsi di Patti and Dell'Ariccia (2004) focused on firms' creation. Guiso et al. (2004) highlighted the effect of local financial development on a wide set of outcomes, such as business establishment, firm entry, and growth. In particular, they studied the effect of banking regulation on the cost and access to credit.

3.2. Enforcement System

The Italian National Institute of Statistics (ISTAT) pointed out that 60% of the civil proceedings in Italy are related to economic affairs, which consequently affect the credit market. For this reason, because of a less effective enforcement system, banks do not easily provide credit, and debt becomes a more expensive source of finance; therefore, even firms are less ready, and have also less funds, to channel money by providing trade credit and supporting customers. Effective enforcement is important because laws and regulations protect creditors only to the extent that they are actually enforced. Diamond (1991, 1993) also emphasizes the importance of contract enforcement. The author suggests that short-term financing may reduce the expropriation of creditors by borrowers. Therefore, banks will use short-term credit to control borrowers (Diamond 1991). Higher enforcement and greater creditor protection increases the use of debt (Giannetti 2003) and should, consequently, increase the use of trade credit as well.

3.3. North vs. South Differences

Italy has a financial system that is highly integrated with international financial markets; however, there are regional differences in the efficiency of the financial system, along

with disparities in its economic structure (Guiso et al. 2004). In particular, the Italian banking industry is characterized by marked differences in the conditions of local economies, both in terms of real and financial variables (Colombo and Turati 2004). In Italy, there are marked differences between the north and the south of the country, where the north of Italy is the most industrialized and economically developed area. Furthermore, it is also possible to identify relevant differences among provinces inside the same region (Benfratello et al. 2008). If the local context is relevant from an economic point of view, it should also be so from a financial point of view. Alessandrini et al. (2009) observe that, according to the Bank of Italy statistics, in Italy, more than 90 percent of credit to borrowers located in a province is granted by branches located in the same province. The relevant role of the local market is also shown by Bonaccorsi di Patti and Gobbi (2001), who found that 82% of the loans are provided by local banks at the provincial level (Gobbi 2005). Thus, in spite of the international process of financial market integration, which is of direct interest to Italy, the local market remains important.

The process of regulatory reform that started in the nineties, without the limitation on the opening of branches, has led to important changes both in the size and structure of the banking sector, with a remarkable impact particularly in the southern Italian regions. The M&A's activity led to a wide and profound reorganization of the banking system and an increased bank operating efficiency. Leading Italian banking groups, mainly operating in the northern regions, took control over many local banks, some of them of significant dimensions.

Colombo and Turati (2004) suggest that the consolidation of the Italian banking sector generated, jointly with efficiency gains, some form of distortions in credit allocation, at least temporarily, that should become less relevant over the time. The M&A waves within Italy improved efficiency; in addition, cross-country M&A processes at the international level allowed efficiency gains in Eastern European and in Latin America banking markets thanks to foreign banks (Colombo and Turati 2004). However, the relation between banks operating in disparate markets, each with its unique developmental stage, structure, culture and operations, may trigger processes of savings reallocation (at the expense of credit availability at the local level), probably leading to a credit-rationing phenomena, e.g., the loan–deposit ratio in the south is far lower compared with the same indicator in the north of Italy, and it cannot be excluded that, beside the advantages of consolidation in terms of efficiency, the M&A wave of the 1990s has induced some sort of deposit drain, undermining the growth potential of that region. It is quite possible that a lower loan–deposit rate in the south with respect to the center–north regions reflects structural characteristics of the southern local economies (in terms, for example, of the lower quality of borrowers, the government transfers directed to the area, or the different degrees of efficiency of the local justice), but the issue seems to deserve additional investigation. Differences in the credit demand can be determined by structural features of the south. For example, the existence in the south of financial support by the state and the European Union reduced the financial needs of firms in this region (Panetta 2003). Similarly, the lower loan–deposit rate in the south can be due to its inefficient judicial system; Bianco et al. (2001) showed that an inefficient enforcement system in an area reduces the credit availability at the local level. In addition, Guiso et al. (2001) suggest that differences in credit availability locally depends on the social capital of the area.

4. Sample, Model and Variables

This section outlines our study's sample, the employed variables and their interrelationships. The sample was stratified according to the definition of small and medium-sized firms and to information on the corporate location of the firms. The analysis is based on small and medium-sized firms, defined according to the criteria provided by the EU. Data were obtained for firms with less than 250 employees and total sales of less than EUR 40 million. We selected the companies for our sample from the Orbis database of the Bureau Van Dijk. The database is made up of 90,763 Italian non-financial firms for the period 2015–2021.

In the empirical model, we test how local financial development affects the trade-credit decisions of SMEs (H1) and, subsequently, how local enforcement is able to moderate such an effect (H2). Moreover, we also investigate (H3) the influence of the COVID-19 crisis on the relationships analyzed in H1 and H2. We applied the OLS technique, clustering at both the firm and provincial levels. Taking into account previous empirical analyses (e.g., Fasano et al. 2023), the model of the present study used the following dependent and explanatory variables. Our dependent variable, Receivables, is calculated as the ratio of accounts receivables to total assets. This variable has been used in the work of Deloof and La Rocca (2015). Explanatory variables are the following: Findevelop, which is the number of bank branches over population (1000 inhabitants) in the province (Fasano and La Rocca 2023a, 2023b). Jureff measures judicial efficiency and takes into account the length of the procedures in the courts and the ability of the judicial offices to conclude the workload, which is calculated as the number of trials for which a verdict was reached over the total number of trials in the province. A low score for this metric suggests that the judicial district does not work efficiently, as there are many civil proceedings of long duration. We also included in our model the interaction term between the variable Findevelop and the variable Jureff. Firm age is the natural logarithm of the firm's age. Firm size is the natural logarithm of the ratio of tangible assets on total assets. ROA equals EBIT to total assets. Sales growth measures the increase of the firm's turnover, scaled by total assets. Turnover measures a firm's turnovers scaled on total assets, in line with the contribution of Guiso et al. (2004).

In addition, to control for macroeconomic effects of fiscal and monetary policies, we included in our model the variables Deficit_GDP, which is Italian's government deficit as a fraction of GDP (Silva 2021), and the variable EPU, which is the economic policy uncertainty index (Baker et al. 2016) calculated in natural logarithmic terms. The source of such variables is the Italian National Institute of Statistics (ISTAT). Additionally, we incorporate the variable TA_ECB, calculated in natural logarithmic terms, which is the total assets of the European Central Bank (Cortes et al. 2022), whose source is the database Statista.it.

In the empirical analysis, dummies were used to control for industry affiliation. In particular, the dataset contains information regarding the ATECO04 industry classification of each firm, based on the classification's first two digits. These variables were included to capture industry-specific unobserved characteristics, as noted in Showalter (1999) and underscored by their significance during the COVID-19 crisis (Zimon et al. 2022). Moreover, it is well known that, in Italy, from economic, political and social points of view, the north is more developed than the south. In order to take into account the possibility that a firm's location in the south influences its financial decisions, a dummy (equal to 1 if a firm was located in the south and 0 if otherwise) was added to the model to control for this difference.

5. Empirical Results

5.1. Descriptives and Correlations

Table 1 reports the descriptive statistics for our sample.

Descriptive statistics indicate that the values of the variables in our model align with those in the existing literature, presenting no significant issues. Notably, there is substantial variability in the dependent variable, which is good news in econometric terms, as the regression captures a broader range of values, offering richer insights from the data and enhancing the generalizability of the results. Similarly, the variables Findevelop and Jureff also exhibit significant variability. This suggests that, in Italy, there are marked differences in the development of these important independent variables across provinces both in the legal and the financial systems, as previously indicated when discussing the banking system transformation in Italy in Section 3. It is also possible to note that our sample is composed of very heterogeneous companies in terms of age, size, profitability, sales growth and turnover. Moreover, it is interesting to observe that the EPU variable had a minimum value of 78.22 for the year 2017 up to a maximum value of 173.08 for the year

2020, which was influenced by the COVID-19 crisis. In relation to the variable deficit_GDP, the minimum value refers to the year 2021, when the consequences of the pandemic crisis were still present, whereas the maximum value concerns the year 2019. Finally, as regards the variable TA_ECB, the minimum value refers to the year 2015, while the maximum value is related to the year 2021, since this ratio has been growing continuously over the years.

Table 1. Descriptive statistics.

	Mean	**Median**	**St. Dev.**	**Min.**	**Max**
Receivables	0.352	0.338	0.201	0.000	0.966
Findevelop	1.987	1.220	1.410	0.021	5.221
Jureff	0.157	0.156	0.031	0.005	0.345
Firm age	19	20	14	1	131
Firm size	2.094	1.833	2.286	0.916	4.130
ROA	0.059	0.044	0.077	−0.116	0.339
Sales growth	0.097	0.054	0.351	−0.969	2.428
Turnover	1.368	1.211	0.728	0.000	4.352
Deficit_GDP	−4.82	−2.4	4.44	−11.8	−1.6
EPU	4.775	4.741	0.224	4.359	5.154
TA_ECB	6.096	6.103	0.281	5.548	6.522

Table 2 displays our correlation matrix. All correlations are statistically significant at the 0.05 level or better. A positive correlation between Findevelop and Receivables offers an initial insight into our potential findings. Additionally, a positive correlation is observed between Jureff and Receivables. Although the low correlation values of Table 2 seem to posit no problem, we also tested for possible multicollinearity using variance inflation factors. This technique is used to assess the extent of multicollinearity in a multiple regression analysis that could occur when two or more independent variables in a regression model are highly correlated with each other. Using this method, we found that the maximum value in the regression analyses of Tables 3 and 4 is well below the generally accepted cut-off of 10 (or, more conservatively, 5) for regression models, as indicated by La Rocca et al. (2022). (These results have not been included).

Table 2. Correlation matrix.

		(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**
(1)	Receivables	1.000										
(2)	Findevelop	0.098	1.000									
(3)	Jureff	0.102	−0.164	1.000								
(4)	Firm age	0.004	0.004	−0.045	1.000							
(5)	Firm size	0.018	0.011	−0.031	0.136	1.000						
(6)	ROA	0.041	0.037	0.072	−0.082	−0.078	1.000					
(7)	Sales growth	0.001	0.011	0.015	−0.170	−0.015	0.124	1.000				
(8)	Turnover	0.029	0.029	0.162	−0.162	−0.348	0.179	0.098	1.000			
(9)	Deficit_GDP	0.001	0.008	−0.003	0.003	0.012	0.009	0.001	0.001	1.000		
(10)	EPU	0.006	0.019	−0.005	0.006	0.002	0.018	0.031	0.081	0.001	1.000	
(11)	TA_ECB	−0.002	−0.042	0.003	−0.005	−0.003	−0.016	−0.002	−0.001	−0.006	−0.004	1.000

Table 3. Main model regression results: effect of local finance on trade credit as moderated by judicial enforcement and with a focus on the role of the COVID-19 crisis.

Variables	**(1)** **Receivables**	**(2)** **Receivables**	**(3)** **Receivables**	**(4)** **Receivables**
Findevelop	0.021 ***	0.024 ***	0.025 ***	0.029 ***
	(0.001)	(0.000)	(0.000)	(0.000)
Jureff		−0.061	−0.063	−0.064
		(0.417)	(0.399)	(0.389)
Findevelop × Jureff			0.010 ***	0.005 ***
			(0.000)	(0.000)

Table 3. *Cont.*

Variables	(1) Receivables	(2) Receivables	(3) Receivables	(4) Receivables
Findevelop × Jureff × D_covid				−0.013 ***
				(0.000)
Firm age	0.002	0.002	0.002	0.004
	(0.488)	(0.440)	(0.537)	(0.515)
Firm size	−0.069	−0.074	0.081 **	0.090 ***
	(0.618)	(0.691)	(0.037)	(0.017)
ROA	0.137 ***	0.129 ***	0.141 ***	−0.145 ***
	(0.000)	(0.000)	(0.000)	(0.000)
Sales growth	−0.003	−0.004	−0.004 *	−0.004 *
	(0.100)	(0.102)	(0.076)	(0.088)
Turnover	0.046 ***	0.046 ***	0.046 ***	0.049 ***
	(0.000)	(0.000)	(0.000)	(0.000)
Deficit_GDP	−0.040 **	−0.031 **	−0.030 **	−0.036 **
	(0.017)	(0.012)	(0.012)	(0.013)
EPU	0.147	0.211 **	0.223 *	0.198
	(0.049)	(0.037)	(0.046)	(0.048)
TA_ECB	0.374	0.368	0.371	0.365
	(0.547)	(0.525)	(0.609)	(0.589)
North	0.004	0.004	0.004	0.039
	(0.549)	(0.518)	(0.544)	(0.528)
Observations	90,763	90,763	90,763	90,763
R-squared adjusted	0.081	0.084	0.101	0.121

Standard errors are in parentheses. The superscripts denote significance as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions report standardized beta coefficients and heteroscedastic robust standard errors.

Table 4. Robustness tests with alternative independent variables.

Variables	(1) Receivables	(2) Receivables	(3) Receivables
Loans/GDP	0.032 ***		
	(0.001)		
Loans/deposits		0.048 ***	
		(0.000)	
Deposits/GDP			0.054 ***
			(0.000)
Jureff	−0.009	−0.036	−0.041
	(0.242)	(0.310)	(0.320)
Findevelop × Jureff	0.005 ***	0.006 ***	0.005 ***
	(0.000)	(0.000)	(0.000)
Findevelop × Jureff × D_covid	−0.081 ***	−0.077 ***	−0.023 ***
	(0.000)	(0.000)	(0.000)
Firm age	0.004	0.004	0.004
	(0.500)	(0.500)	(0.500)
Firm size	−0.066	0.076 **	0.087 ***
	(0.537)	(0.033)	(0.015)
ROA	−0.198 ***	−0.203 ***	−0.231 ***
	(0.000)	(0.000)	(0.000)
Sales growth	−0.002 *	−0.002 *	−0.002 *
	(0.088)	(0.088)	(0.088)
Turnover	0.117 ***	0.063 ***	0.102 ***
	(0.000)	(0.000)	(0.000)
Deficit_GDP	−0.043 **	−0.058 **	−0.062 **
	(0.011)	(0.011)	(0.011)
EPU	0.146	0.199 **	0.237 *
	(0.046)	(0.036)	(0.039)

Table 4. *Cont.*

Variables	(1) Receivables	(2) Receivables	(3) Receivables
TA_ECB	0.374	0.368	0.371
	(0.547)	(0.525)	(0.609)
North	0.178	0.190	0.147
	(0.491)	(0.498)	(0.486)
Observations	90,763	90,763	90,763
R-squared	0.121	0.120	0.119

Standard errors are in parentheses. The superscripts denote significance as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions report standardized beta coefficients and heteroscedastic robust standard errors.

5.2. Findings

Table 3 presents regression results obtained through ordinary least squares, with standard errors clustered at the firm level; this allows errors to be correlated for the dependent variable within the same company. Since our variable of interest, i.e., the local financial development measure, varies only at the provincial level, we further adjusted the standard errors to assess potential residual dependencies within provincial clusters. This estimation procedure takes multiple dimensions into account at the same time, as clustering makes it possible to control for observations that are correlated under two dimensions. Hence, regressions correct standard errors for the possible dependence of the residuals within clusters.

The results displayed in Column 1 show the positive effect that local financial development has on firms' use of trade credit, confirming our first hypothesis. This finding remains consistent in subsequent analyses, even with the addition of other explanatory variables. In Column 2, we incorporated the Jureff variable, which turned out not to be significant. Throughout the regressions, the coefficients for both our primary independent variable (Findevelop) and other control variables remain stable. Column 3 demonstrates the moderation effect of the Jureff variable. Our analysis indicates that the efficiency of the legal system accentuates the positive influence that local financial development has on trade-credit usage, which also validates our second hypothesis. In practical terms, given that Findevelop has a mean of 1.987 and Jureff of 0.157, results from Column 3 suggest that an increase of 0.1 in Findevelop would lead to a 3.1% rise in trade credit relative to its presence on the balance sheet. This percentage would further rise if enforcement (Jureff) surpassed its average, due to a positive moderation effect.

Column 4 adds another specification by introducing a three-way interaction between the variables Findevelop, Jureff, and a dummy variable, D_COVID (set to one for observations from 2020 and 2021, and zero otherwise). Thus, we ran a regression analysis, including all the independent variables, on the two-way interaction between Findevelop and Jureff and on the three-way interaction term. Intriguingly, during the pandemic, the impacts hypothesized in both the first and second hypotheses were noticeably diminished, confirming both hypotheses H3a and H3b. This reveals that, in recessionary periods, firms might risk forgoing the advantages typically gleaned by more mature institutions, particularly financial and judicial ones. Government interventions disrupt enterprises' financing conditions, which result in companies' unusual financing behavior. In challenging economic conditions, the pervasive perception of heightened risk and distrust might deter firms that usually have better access to financial credit and that are consequently able to offer trade credit from continuing such practices. Nonetheless, a robust judicial system retains its significance even during crises, albeit with diminished intensity.

Our results concerning control variables are in line with the broader trade-credit literature. Notably, a firm's age does not influence trade-credit usage, whereas a company's size becomes notably more influential when considering the interaction of judiciary and financial development and during the COVID-19 period, meaning that larger firms benefit more from trade credit when we consider these two factors. The decision to offer trade credit

seems to be influenced significantly by a company's turnover and profitability (normally positive, indicating that more profitable firms are more inclined to finance their partners); it was negative during the COVID-19 crisis, which meant that, throughout that period of mutual distrust, more profitable companies reduced trade-credit financing). Among the macroeconomic variables accounting for the external context (especially considering the COVID-19 crisis and institutional responses), the government deficit-to-GDP ratio appears most consequential in trade-credit decisions. The results regarding EPU are not conclusive, as it is significant at times.

Interestingly, the variable distinguishing between Italian regions was not significant. This suggests that what truly matters are financial development and enforcement. Another notable finding is that the more detailed and sophisticated the inclusion of these factors in the models are, the more the adjusted R^2 increases.

5.3. Robustness Test

For our robustness tests, we relaunched our regression model using a number of alternative independent variables as a measure of local financial development. These alternative definitions substituted our main independent variable, replicating column 4 of Table 3 with them instead. The variables used were the following: loans/GDP as the ratio of loans provided by banks over GDP in the province[8]; loans/deposits as the ratio of loans provided by banks over deposits collected by banks in the province[9]; and deposits/GDP as the ratio of deposits collected by banks over GDP in the province[10].

The results of the robustness tests show that what emerges from Table 3 is also confirmed when using different proxies for our independent variable. These results are remarkably stable regarding financial development, judiciary enforcement, their interaction and the rest of the controls, both in sign and in significance. These findings corroborate the adequacy of the main independent variable and, consequently, the suitability of these alternative measures of financial development.

6. Conclusions and Implications

This paper examines the impact that local financial development has on trade-credit choices by Italian firms. Specifically, it focuses on institutions and their influence on corporate financing decisions. Uniquely, this research also delves into another institutional factor: the efficiency of the legal system. In light of the disruptions caused by the COVID-19 pandemic, it was essential to examine the moderating effect it had on the relationship between financial and judicial institutions and corporate financing. Our study fits into the broader literature that explores both financial institutions and the efficiency of legal systems. We have intertwined these two strands of research to discern their combined effect and their relevance during crisis periods. These findings reveal that institutional factors play a significant role in shaping trade-credit policy, even when one accounts for the heterogeneity in company characteristics. A developed local financial system facilitates credit access, enabling firms to offer more extended trade credit to their customers, who are normally located in the same region/area. This benefit is further amplified by an efficient judicial system that ensures the enforcement of contracts. Companies operating in regions with effective legal frameworks are more willing to engage in financial contracts, knowing that their rights will be protected. Such an environment augments the positive impact that the banking system has on trade-credit utilization. However, during the COVID-19 crisis, both the influence that local financial development had on trade credit and the moderating role played by enforcement diminished. The broader economic downturn appears to have curtailed financial transactions and their beneficial effects on businesses. Our findings corroborate all three research hypotheses and shed light on a previously identified research gap. These results are robust according to different definitions of the financial development variable.

Our findings are in line with those of Deloof and La Rocca (2015), who highlight the positive effect that local financial development has on firms' use of trade credit, and

with those of Niskanen and Niskanen (2006) who observe significant differences at the provincial level in trade-credit policy. However, we provide further evidence in this field of research by investigating the moderating role of judicial enforcement. In particular, our analyses also confirm the relevant positive impact of legal institutions in regulating the financial system, as evidenced by La Porta et al. (1997, 1998) and Beck and Levine (2004). This positive impact of judicial enforcement increases trust in creditor protection and, in turn, enhances the provision of trade credit.

In essence, a robust banking sector should consistently support SMEs financially, ensuring the availability of liquidity, given sound earnings and collaterals. Such support, in turn, allows firms to offer trade credit to their customers. This study underscores the crucial role played by judicial enforcement and the overarching macroeconomic landscape. From a practical standpoint, there is a pressing need to bolster local financial infrastructures, aiding sources of business financing. Concurrently, enhancing the legal system is pivotal in order to capitalize on the benefits of robust local financial markets. The challenges witnessed during the COVID-19 crisis emphasize the importance of preserving financial flexibility and highlight potential avenues for government intervention. Promoting trade-credit use can offer multifaceted benefits, not just for altruistic reasons but as a holistic economic strategy, especially during downturns. Future research could delve into post-pandemic corporate behaviors and investigate whether patterns will revert to pre-crisis norms. Forthcoming studies could also investigate trade-credit strategies in light of the local financial development and judicial enforcement of companies in nations other than Italy.

Our contribution provides important implications for both policy makers and firms. In fact, a noteworthy inference drawn from our findings is that the significance of proximity between banks and firms varies depending on the level of legal enforcement within a province. In this context, we suggest that policymakers should enhance the efficiency of local financial markets and legal systems to address firms' credit requirements. By enhancing financial and legal institutions, decision makers can facilitate better access to trade credit.

Furthermore, policy makers should also consider that the relevance of bank branch concentration and the impact of judicial enforcement depend on the macroeconomic conditions under which a firm operates. The COVID-19 crisis serves as a clear example of how the economic environment can be significant. In an economic downturn, the effectiveness of financial and legal institutions becomes even more crucial. Politicians should recognize this importance, especially in light of the economic challenges brought about by the COVID-19 pandemic, as firms require financial support to recover from the crisis.

Notes

1. Cheng and Degryse (2006) explore the impact of the development of bank versus non-bank financial institutions on the growth rate of Chinese provinces over the period 1995–2003 and conclude that only bank loans have a significant impact on local economic growth.
2. A selective review of the research on the role of legal institutions in shaping the functioning of financial systems is provided by Beck and Levine (2004).

3   In 2000, only 297 companies traded on the Milan Stock Exchange (266 in 1990 and 168 in 1980), and the total capitalized value of companies was EUR 818,384 million, approximately 70% of the national GDP.

4   More efficient banks have taken over less efficient ones (Focarelli et al. 2002).

5   Competition in the Italian banking system brought a strong reduction in banking margins on deposits and loans.

6   In Italy, the number of bank branches increased since the beginning of the twenty-first century, as evidenced by a report from the international company KPMG entitled "Sportelli bancari e nuovi modelli distributivi. Contesto di riferimento e scenari evolutivi, 2013".

7   Available at https://assets.kpmg/content/dam/kpmg/it/pdf/2017/02/KPMGSportellibancarinuovimodellidistributivi.pdf (accessed on 1 November 2023). The average number of banks in each Italian province was 21 in 1980 and rose to 29 in 1996 and to 32 in 2002. About 70% of Italian banking groups in 2002 had branches in more than 50 provinces.

8   Beck and Demirgüç-Kunt (2009) at the country level propose this indicator to measure the size of the financial system. It looks at the asset side of the bank and captures the important activities of a bank: its credit allocation. It is a typical indicator in the finance and law literature. Countries that have a high level of this indicator grow faster.

9   Beck and Demirgüç-Kunt (2009) at the country level propose this indicator as a measure of bank efficiency. If the loan-to-deposit ratio is high, it could signal better efficiency. However, if this indicator is higher than 1, this means that loans are financed with other resources rather than with local deposits.

10   Beck and Demirgüç-Kunt (2009) at the country level propose this indicator to measure the size of the financial system and to measure the resources of the financial sector available for its lending activities. It measures the liabilities' side of the banks. In general, the value of the deposit varies positively with the growth of the GDP.

References

Alessandrini, Pietro, and Alberto Zazzaro. 1999. A "possibilist" approach to local financial systems and regional development: The Italian experience. In *Money and the Space Economy*. Edited by Martin Ron. New York: Wiley & Sons, pp. 71–92.

Alessandrini, Pietro, Andrea F. Presbitero, and Alberto Zazzaro. 2009. Banks, distances and firms' financing constraints. *Review of Finance* 13: 261–307. [CrossRef]

Allen, Franklin, Jun Qian, and Meijun Qian. 2005. Law, finance, and economic growth in China. *Journal of Financial Economics* 77: 57–116. [CrossRef]

Angelini, Paolo, and Nicola Cetorelli. 2003. The Effects of Regulatory Reform on Competition in the Banking Industry. *Journal of Money, Credit and Banking* 35: 663–84. [CrossRef]

Ayyagari, Meghana, Asli Demirguc-Kunt, and Vojislav Maksimovic. 2008. *Formal versus Informal Finance: Evidence from China*. Policy Research WP4465. Washington, DC: The World Bank.

Baker, Scott R., Nicholas Bloom, and Steven J. Davis. 2016. Vol. 131 November 2016 Issue 4. *The Quarterly Journal of Economics* 1593: 1636.

Beck, Thorsten, and Asli Demirgüç-Kunt. 2009. *Financial Institutions and Markets across Countries and Over Time—Data and Analysis*. Working Paper. Washington, DC: The World Bank.

Beck, Thorsten, and Ross Levine. 2004. Legal Institutions and Financial Development. In *Handbook of New Institutional Economics*. Edited by Claude Menard and Mary Shirley Papers. Policy Research Working Papers. Dordrecht: Kluwer Dordrecht.

Benfratello, Luigi, Fabio Schiantarelli, and Alessandro Sembenelli. 2008. Banks and innovation: Microeconometric evidence on Italian firms. *Journal of Financial Economics* 90: 197–217. [CrossRef]

Benmelech, Efraim, and Nitzan Tzur-Ilan. 2020. *The Determinants of Fiscal and Monetary Policies during the COVID-19 Crisis*. NBER Working Paper, n. 27461. Cambridge: National Bureau of Economic Research.

Bianco, Madga, Tullio Jappelli, and Marco Pagano. 2001. Courts and Banks: Effects of Judicial Enforcement on Credit Markets. *Journal of Money, Credit and Banking* 37: 223–44. [CrossRef]

Bonaccorsi di Patti, Emilia, and Giorgio Gobbi. 2001. The Changing Structure of Local Credit Markets: Are Small Business Special? *Journal of Banking and Finance* 25: 2209–37. [CrossRef]

Bonaccorsi di Patti, Emilia, and Giovanni Dell'Ariccia. 2004. Bank Competition and Firm Creation. *Journal of Money Credit and Banking* 36: 956–70. [CrossRef]

Bose, Sudipta, Syed Shams, Muhammad J. Ali, and Dessaleng Mihret. 2021. COVID-19 impact, sustainability performance and firm value: International evidence. *Accounting & Finance* 62: 597–643.

Carter, David, Sharif Mazumder, Betty J. Simkins, and Eric Sisneros. 2022. The stock price reaction of the COVID-19 pandemic on the airline, hotel, and tourism industries. *Finance Research Letters* 44: 102047. [CrossRef]

Chen, Hsuan-Chi, and Chia-Wei Yeh. 2021. Global financial crisis and COVID-19: Industrial reactions. *Finance Research Letters* 42: 101940. [CrossRef] [PubMed]

Chen, Xuesheng, Caixia Liu, Feng Liu, and Mingjie Fang. 2021. Firm sustainable growth during the COVID-19 pandemic: The role of customer concentration. *Emerging Markets Finance and Trade* 57: 1566–77. [CrossRef]

Cheng, Xiaoqiang, and Hans Degryse. 2006. The Impact of Bank and Non-Bank Financial Institutions on Local Economic Growth in China. *Journal of Financial Services Research* 37: 179–99. [CrossRef]

Clay, Karen. 1997. Trade, Institutions, and Credit. *Explorations In Economic History* 34: 495–521. [CrossRef]

Colombo, Luca, and Gilberto Turati. 2004. The Role of Local Real and Financial Variables in Banking Industry Consolidation: The Case of Italy. Available online: https://www.researchgate.net/publication/242088941_The_Role_of_Local_Real_and_Financial_Variables_in_Banking_Industry_Consolidation_The_Case_of_Italy (accessed on 1 November 2023).

Cortes, Gustavo S., George P. Gao, Felipe BG Silva, and Zhaogang Song. 2022. Unconventional Monetary Policy and Disaster Risk: Evidence from the Subprime and COVID–19 Crises. *Journal of International Money and Finance* 122: 102543. [CrossRef]

Costi, Renzo. 2007. *L'Ordinamento Bancario*. Bologna: Il Mulino.

Cull, Robert, Lixin C. Xu, and Tian Zhu. 2007. *Bank Finance and Trade Credit during China's Transition*. World Bank Working Paper Series. Washington, DC: The World Bank.

Dantas, Manuela M., Kenneth J. Merkley, and Felipe B. G. Silva. 2023. Government Guarantees and Banks' Income Smoothing. *Journal of Financial Services Research* 63: 123–73. [CrossRef]

Degryse, Hans, and Steven Ongena. 2005. Distance, lending relationships and competition. *Journal of Finance* 60: 231–66. [CrossRef]

Deloof, Marc, and Maurizio La Rocca. 2015. Local financial development and the trade credit policy of Italian SMEs. *Small Business Economics* 44: 905–24. [CrossRef]

Demirguc-Kunt, Asli, and Vojislav Maksimovic. 2001. *Firms as Financial Intermediaries: Evidence from Trade Credit Data*. World Bank Policy Research Working Paper No. 2696. Washington, DC: The World Bank.

Diamond, Douglas W. 1991. Debt Maturity Structure and Liquidity Risk. *Quarterly Journal of Economics* 106: 709–37. [CrossRef]

Diamond, Douglas W. 1993. Seniority and Maturity of Debt Contracts. *Journal of Financial Economics* 33: 341–68. [CrossRef]

Dow, Sheila, and Alberto Montagnoli. 2007. The Regional Transmission of UK Monetary Policy. *Regional Studies* 41: 797–808. [CrossRef]

Erdem, Orhan. 2020. Freedom and stock market performance during COVID-19 outbreak. *Finanze Research Letters* 36: 101671. [CrossRef]

Fasano, Francesco, and Marc Deloof. 2021. Local financial development and cash holdings in Italian SMEs. *International Small Business Journal* 39: 781–99. [CrossRef]

Fasano, Francesco, and Maurizio La Rocca. 2023a. Local versus national banking development in Europe: Who is the winner? *Eurasian Business Review*, 1–30. [CrossRef]

Fasano, Francesco, and Tiziana La Rocca. 2023b. Does the bank-firm human relationship still matter for SMEs? The game-changing role of digitalization. *Small Business Economics*, 1–20. [CrossRef]

Fasano, Francesco, Javier Sánchez-Vidal, and Maurizio La Rocca. 2022. The role of government policies for Italian firms during the COVID-19 crisis. *Finance Research Letters* 50: 103273. [CrossRef] [PubMed]

Fasano, Francesco, Maurizio La Rocca, and Francesco Rizzo. 2023. Working capital determinants in the automotive industry: An empirical analysis. *International Journal of Automotive Technology and Management* 23: 257–79. [CrossRef]

Fendel, Ralf, Frederik Neugebauer, and Lilli Zimmermann. 2021. Reactions of euro area government yields to COVID-19 related policy measure announcements by the European commission and the European central bank. *Finance Research Letters* 42: 101917. [CrossRef]

FinMonitor. 2006. *Rapporto Semestrale su Fusioni e Aggregazioni tra gli Intermediari Finanziari in Europa*. Bergamo: University of Bergamo.

Fisman, Raymond, and Inessa Love. 2003. Trade credit, financial intermediary development, and industry growth. *Journal of Finance* 58: 353–74. [CrossRef]

Focarelli, Dario, Fabio Panetta, and Carmelo Salleo. 2002. Why Do Banks Merge? *Journal of Money, Credit and Banking* 34: 1047–66. [CrossRef]

Ge, Ying, and Jiaping Qiu. 2007. Financial development, bank discrimination and trade credit. *Journal of Banking and Finance* 31: 513–30. [CrossRef]

Giannetti, Mariassunta. 2003. Do Better Institutions Mitigate Agency Problems? Evidence from Corporate Finance Choices. *Journal of Financial and Quantitative Analysis* 38: 185–212. [CrossRef]

Gobbi, Giorgio. 2005. *Il rapporto-Banca Impresa in Italia: Che cosa è Cambiato negli Ultimi Dieci Anni?* Rome: Banca d'Italia.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales. 2001. *The Role of Social Capital in Financial Development*. Working Paper n. 511. Chicago: Center for Research in Security Prices, Università di Chicago.

Guiso, Luigi, Paolo Sapienza, and Luigi Zingales. 2004. Does Local Financial Development Matter? *Quarterly Journal of Economics* 119: 929–69. [CrossRef]

Hartley, Jonathan. S., Alessandro Rebucci, and Daniel Jiménez. 2021. *An Event Study of COVID-19 Central Bank Quantitative Easing in Advanced and Emerging Economies*. NBER Working Paper n.27339. Cambridge: National Bureau of Economic Research.

Hsu, Yu-Lin, and Ya-Chih Yang. 2022. Corporate governance and financial reporting quality during the COVID-19 pandemic. *Finance Research Letters* 47: 102778. [CrossRef]

Hu, Shiwei, and Yuyao Zhang. 2021. COVID-19 pandemic and firm performance: Cross-country evidence. *International Review of Economics & Finance* 74: 365–72.

Iyer, Subramanian R., and Betty J. Simkins. 2022. COVID-19 and the Economy: Summary of research and future directions. *Finance Research Letters* 47: 102801. [CrossRef]

Ke, Yun. 2022. The impact of COVID-19 on firms' cost of equity capital: Early evidence from U.S. public firms. *Finance Research Letters* 46: 102242. [CrossRef]

Kumar, Sonal, and Leila Zbib. 2022. Firm performance during the COVID-19 crisis: Does managerial ability matter? *Finance Research Letters* 47: 102720. [CrossRef]

La Porta, Rafael, Florencio Lopez de Silanes, Andrei Shleifer, and Robert W. Vishny. 1997. Legal Determinants of External Finance. *Journal of Finance* 52: 1131–50. [CrossRef]

La Porta, Rafael, Florencio Lopez de Silanes, Andrei Shleifer, and Robert W. Vishny. 1998. Law and Finance. *Journal of Political Economy* 6: 1113–55. [CrossRef]

La Rocca, Maurizio, Francesco Fasano, Francesco Cappa, and Neha Neha. 2022. The relationship between political connections and firm performance: An empirical analysis in Europe. *Finance Research Letters* 49: 10315. [CrossRef]

Martin, Ron. 1999. The New Economic Geography of Money. In *Money and the Space Economy*. Edited by Ron Martin. Hoboken: John Wiley & Sons, Chapter 1.

Minh, Thanh N., and Anh M. Ngoc. 2021. Political connections, government support and SME tax payments: A note from fixed-effect quantile regression. *Finance Research Letters* 40: 101771. [CrossRef]

Neukirchen, Daniel, Nils Engelhardt, Miguel Krause, and Peter N. Posch. 2022. Firm efficiency and stock returns during the COVID-19 crisis. *Finance Research Letters* 44: 102037. [CrossRef] [PubMed]

Niskanen, Jyrkil, and Mervil Niskanen. 2006. The Determinants of Corporate Trade Credit Policies in a Bank-dominated Financial Environment: The Case of Finnish Small Firms. *European Financial Management, European Financial Management Association* 12: 81–102. [CrossRef]

Panetta, Fabio. 2003. Evoluzione del sistema bancario e finanziamento dell'economia nel Mezzogiorno (Developments in the Banking Market and Company Financing in the Italian Mezzogiorno). *Moneta e Credito* 56: 222.

Petersen, Mitchell, and Raghuram Rajan. 1997. Trade credit: Theories and evidence. *Review of Financial Studies* 10: 661–91. [CrossRef]

Petersen, Mitchell, and Raghuram Rajan. 2002. Does Distance Still Matter: The Information Revolution in Small Business Lending. *Journal of Finance* 57: 2533–70. [CrossRef]

Pollard, Jane S. 2003. Small firm finance and economic geography. *Journal of Economic Geography* 3: 429–52. [CrossRef]

Showalter, Dean. 1999. Strategic Debt: Evidence in Manufacturing. *International Journal of Industrial Organization* 17: 319–33. [CrossRef]

Silva, Felipe Bastos Gurgel. 2021. Fiscal Deficits, Bank Credit Risk, and Loan-Loss Provisions. *Journal of Financial and Quantitative Analysis* 56: 1537–89. [CrossRef]

Tarkom, Augustine. 2021. Impact of COVID-19 exposure on working capital management: The moderating effect of investment opportunities and government incentives. *Finance Reserarch Letters* 47: 102666. [CrossRef] [PubMed]

Tchuigoua, Hubert T., Simo Christelle, and Durrieu François. 2022. Business cycle and cash holdings: Empirical evidence from microfinance institutions. *Finance Research Letters* 50: 103228. [CrossRef]

Utrero-González, Natalia. 2007. Banking regulation, Institutional Framework and Capital Structure: International Evidence from Industry Data. *Quarterly Review of Economics and Finance* 47: 481–506. [CrossRef]

Zimon, Grzegorz, and Robert Dankiewicz. 2020. Trade Credit Management Strategies in SMEs and the COVID-19 Pandemic—A Case of Poland. *Sustainability* 12: 6114. [CrossRef]

Zimon, Grzegorz, Hossein Tarighi, Mahdi Salehi, and Adam Sadowski. 2022. Assessment of Financial Security of SMEs Operating in the Renewable Energy Industry during COVID-19 Pandemic. *Energies* 15: 9627. [CrossRef]