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Challenges in minibond issuance

Analysis of implications for corporates and financial investors

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INTRODUCTION

Over the past fifteen years, the Italian economic and financial backdrop has experienced extensive changes that have led Italian companies to explore new forms of raising financial resources. Traditionally, indeed, the Italian financial system has been characterized by a strong bank credit orientation, with firms having relied, and still relying, on the banking system as their main source of financing. However, the financial crisis of 2008 and the subsequent sovereign debt crisis have highlighted the need for alternative financial instruments for raising capital, especially for Small and Medium Enterprises (SMEs), the companies experiencing the most trouble in credit-crunch situations.

In this context falls the development of the minibond market in Italy. Introduced with the “Sviluppo” decree of 2012 and subsequently legislated with further regulatory interventions, minibonds have represented a significant opportunity for SMEs to access the debt capital market, thus diversifying their sources of financing and reducing their dependence on the banking system.

This dissertation aims to analyze the minibond phenomenon in Italy, exploring its dynamics, characteristics and implications for issuing companies and investors. The research is structured into three main chapters.

The first chapter provides an overview of the corporate financing system in Italy, highlighting the aforementioned traditional dominance of bank credit and the limitations this approach entails for SMEs. The origin and evolution of the minibond market are then analyzed, with particular attention to the regulatory framework that has governed its introduction and development. The stages of the issuance process, the actors involved, and the main characteristics of these financial instruments are explored in depth. The chapter then offers an analysis of historical market trends, highlighting the role minibonds have assumed in the Italian financial landscape and their impact on issuing companies. Finally, the main contributions of the academic literature to the topic of minibonds are presented.

The second chapter focuses on an empirical analysis of minibond issuance in the Triveneto region between 2021 and 2023. The main objective is to identify the characteristics of the issuing companies, through the study of geographic, industrial and size variables. The trend of the main financial indicators before and after the minibond issuance is also analyzed, with the aim of understanding whether and how access to this form of financing has affected the economic-financial situation of the companies involved, as well

as investigating the impact of macroeconomic changes. An additional aspect covered in this chapter concerns the comparison of data collected over the period 2021-2023 with data from an earlier analysis carried out by a former Ca' Foscari University student, Luca Benvenuti, regarding issues made in the Triveneto region between 2013 and 2017. This comparison allows to compare the financial conditions of issuing companies in two different macroeconomic contexts.

The third chapter addresses the topic of unsuccessful minibond issues, analyzing the main factors that can determine the failure of a minibond emission by an SME. To this end, two cases of failed issues are examined, with particular reference to the characteristics of their business and their financial conditions. Through the analysis of the two cases, the chapter aims to identify the main obstacles that companies may face in the process of raising capital through minibonds. Finally, the chapter analyzes some common thresholds of financial indexes adopted by private debt funds to evaluate a potential minibonds investment. In doing so, a dashboard was constructed to check whether the issuing firms analyzed in the second chapter would have passed an initial screening using those defined investment criteria.

Through the three chapters presented, the thesis aims to provide a comprehensive overview of the minibond market in Italy, highlighting both the opportunities and critical issues of this financial instrument. Particularly, the empirical investigation of emissions in the Triveneto region and the study of failed issues provide a better understanding of this market and the dynamics that govern it.

Finally, the research contributes by providing a useful knowledge base for companies, wishing to approach this market, and investors, interested in better understanding the risks and opportunities associated with this financial instrument.

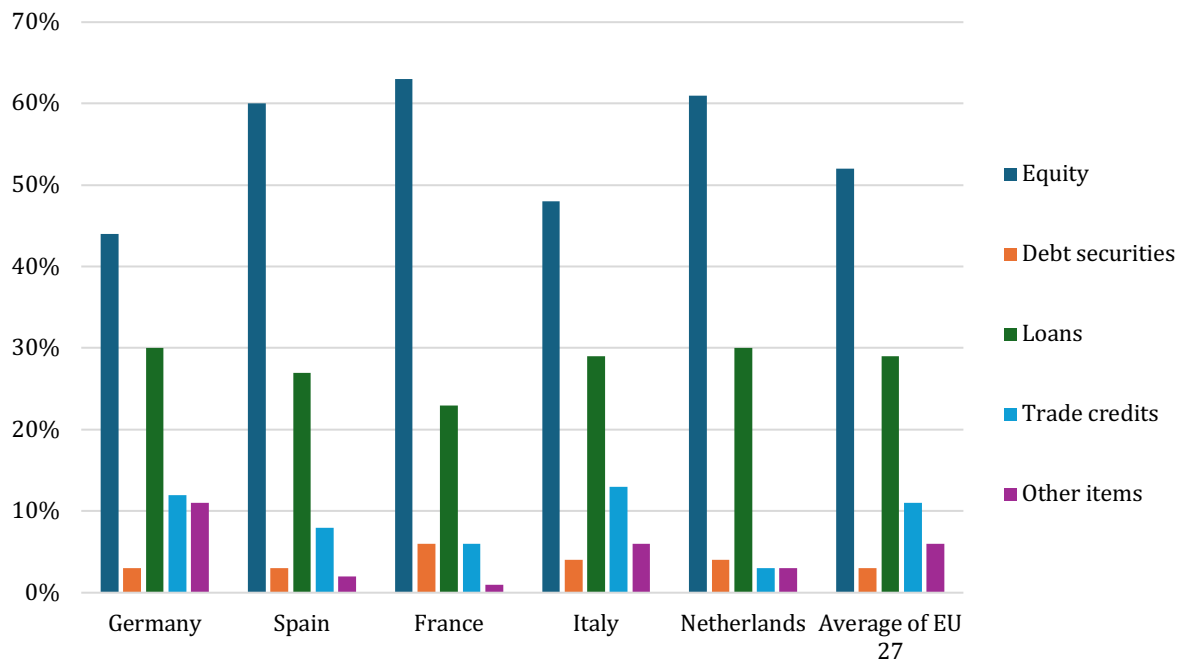
CHAPTER 1
ITALIAN SMES' ACCESS TO THE CAPITAL MARKET.
FOCUS ON MINIBOND FINANCING

1.1. Overview on how companies raise capital: the Italian bank-centrism

There are two main ways companies raise capital to realize their own activities: equity and debt. The composition of these two depends on several factors such as the industry in which the company operates, its moment in the life cycle, the geographical position, the financial industry development, the firm's size, as well as some cultural drivers.

By looking at figure 1.1, which provides an overview on the composition of capital structure of non-financial companies in some EU countries in 2020, it can be observed that the capital composition has not one common pattern among countries. Indeed, Italy and Germany look similar in the volume of loans and trade credits, while France and The Netherlands have a higher share in equity financing and a lower volume of trade credits.

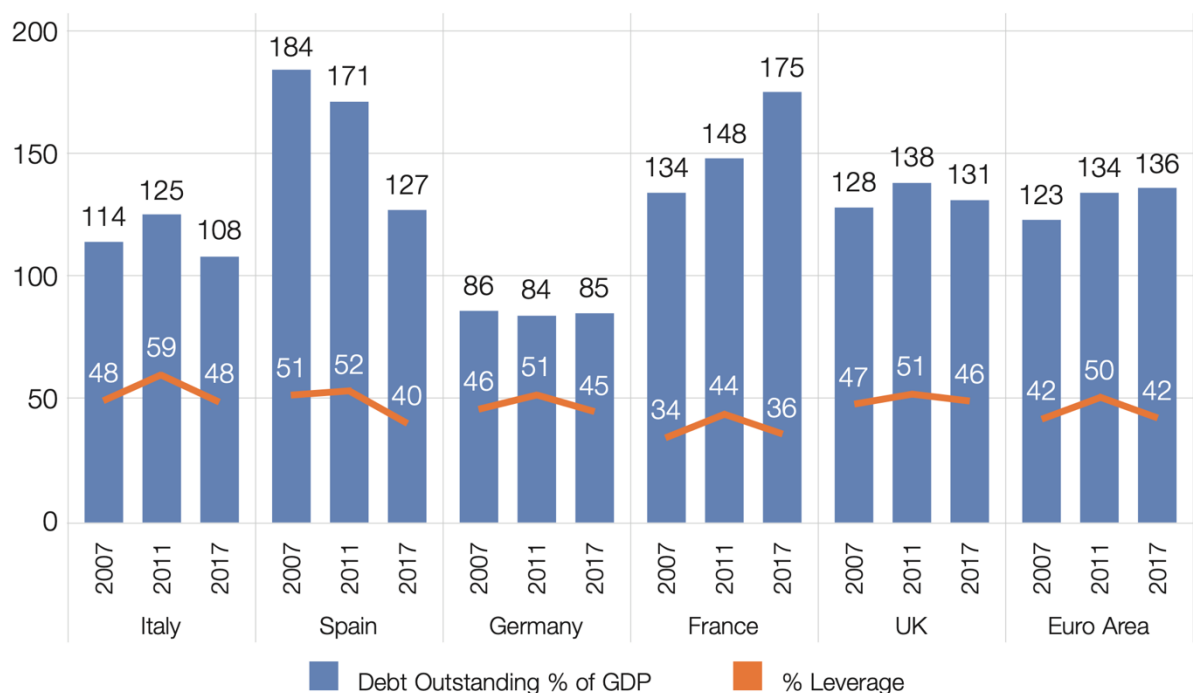
Figure 1.1: Capital structure of non-financial companies from EU countries in 2020 (reworked graphic).



Source: Kristofik et al. *Capital structure of non-financial companies in EU countries – macroeconomic view*. WSB Journal of Business and Finance, 2022.

The difference between countries in how companies raise capital is even sharper when considering exclusively the debt outstanding as a percentage of GDP, and particularly how it evolved during the years compared to leverage.

Figure 1.2: Non-financial companies' debt outstanding (to GDP) and leverage, 2007-2017.



Source: Caselli et al. *The Italian corporate bond market: what is happening to the capital structure of Italian non-financial companies*. Università Bocconi, Baffi Carefin (in partnership with Equita), 2019.

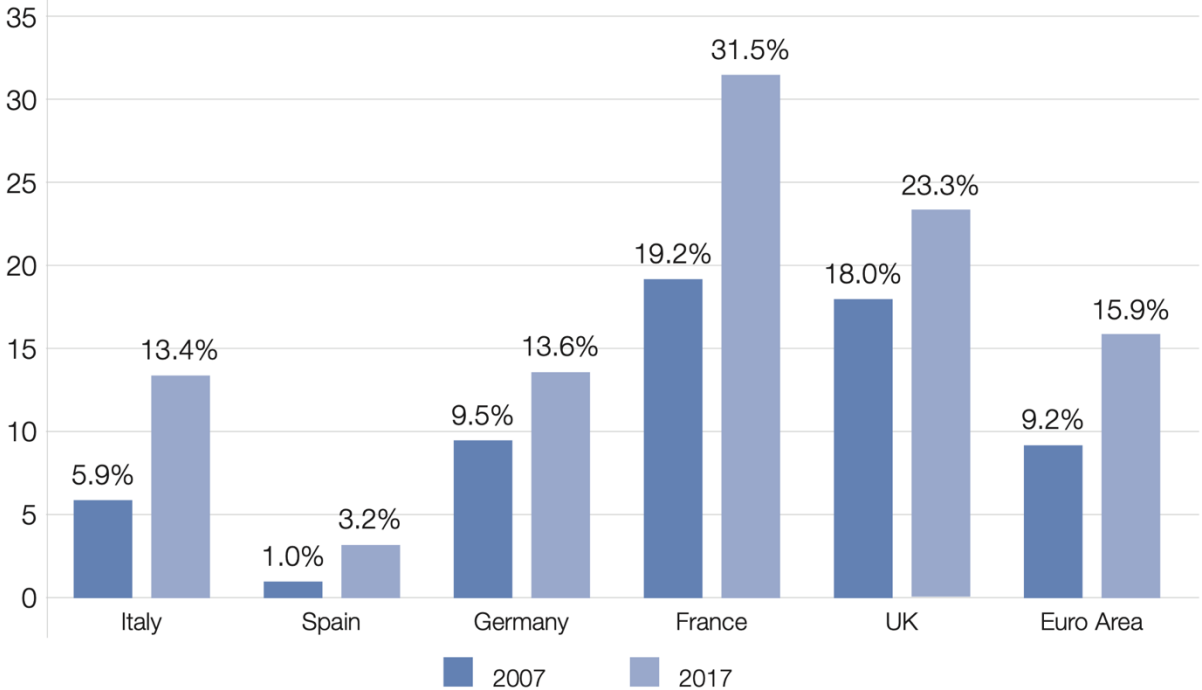
From the figure above, it can be observed that, from 2007 to 2017, the debt outstanding of Italian and German companies was lower than the one of France, Spain, the UK, and the Euro Area. However, the main insight comes from the leverage indicator. By looking at it, a different scenario emerges: Italian and German companies were individually more indebted than the others. This can be traced back to two main aspects.

First, Italian and German companies have a smaller average size than, for example, French companies. Indeed, the backbone of the Italian and German business systems is represented respectively by the "Piccole-Medie Imprese" (PMI), and the "Mittelstand". In both cases, they are the so-called (usually family-owned) Small-Medium Enterprises (SMEs). Specifically, the European Commission defines them as companies with fewer than 250 employees, a turnover lower than €50 million, and/or a balance sheet total lower than €43 million. According to Angelini et al. (2019), in the OECD area, SMEs generate around 60% of total employment and 50% to 60% of value added on average. In the EU area, more than 99% of all firms are SMEs (if also micro-enterprises, those with less than 10 employees, are considered). Those account for most of the employment, with an average share of 66,9%. In this context, Italy stands out with an employment rate in SMEs of 79,6%, which account for about 76% of the total in terms of added value. However, in

Italy, micro-enterprises make a strong difference, since they are about 4.3 million and employ about 13 million people (according to Angelini et al. (2019), 47% of the total, 29% in the European average).

The second aspect, which is a consequence of the large prominence of SMEs, is the greater cultural propensity of Italian and German companies to use financial debt which tends to be of bank origin. Precisely this feature can be observed from the figure below.

Figure 1.3: Share of debt securities over total debt, 2007 and 2017.

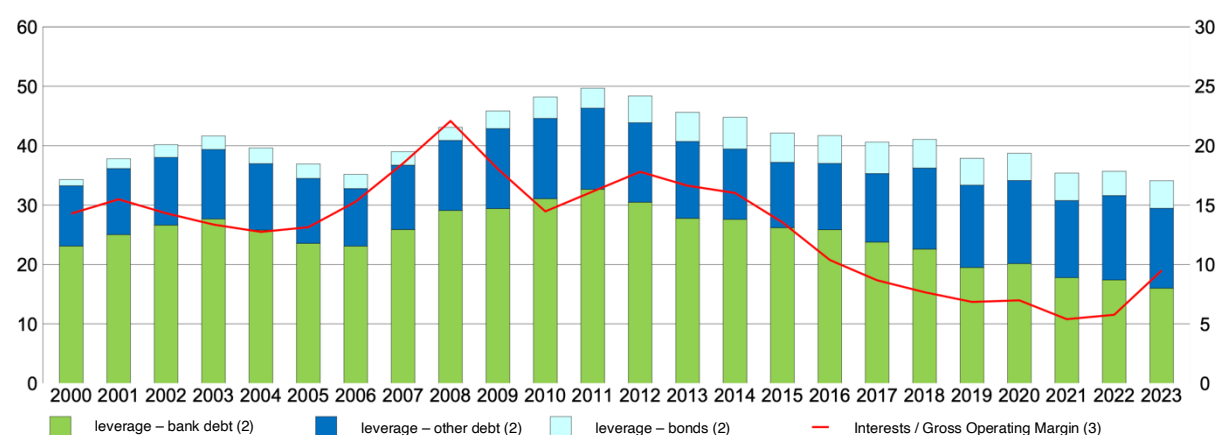


Source: Caselli et al. *The Italian corporate bond market: what is happening to the capital structure of Italian non-financial companies*. Università Bocconi, Baffi Carefin (in partnership with Equita), 2019.

The graph shows how Italian companies, as well as Spanish and German ones, have historically relied poorly on capital markets for their use of financial debt, consequently preferring banking debt. This feature is known as bank-centrism.

Furthermore, figure 1.4 provides a comprehensive overview of how the structure of debt financing of Italian companies has changed over the past 23 years. Particularly, the graph highlights again the strong dependency of Italian companies on the banking system, a factor that intensified between 2006 and 2011 due to the global financial crisis. However, as it will be deepened further, this dependency caused severe liquidity problems when the banking system went into crisis.

Figure 1.4: Italian non-financial corporates' debt indicators (percentage values).



Source: Bank of Italy. *L'economia italiana in breve. Dipartimento di Economia e Statistica*. N. 6, June 2024.

(1) Leverage is calculated as the ratio of financial debt in its three components (bank debt, bonds, other financial debt) to the sum of financial debt and equity (valued at market prices). (2) Cumulative figure for the last four quarters (right-hand scale).

Finally, the figure provides also a second relevant insight. Starting from 2012 onward, the share on corporate bonds has slightly increased (as also shown by figure 1.3) and the share of banking debt (as well as the overall leverage of Italian companies) has gradually been reduced, suggesting that during this timeframe something happened. A reason (certainly not the only one) behind this new trend is the opening up for Italian SMEs, the hard core of the production system, of debt financing through the issuance of bond securities, well-known as minibonds.

1.2. Minibond financing

With the aim of unhinging Italian bank-centrism, the last 12 years have seen a crucial innovation in the Italian SMEs' corporate financing landscape. The introduction of the well-known "minibonds".

The term "minibond" is used to indicate a certain type of corporate bond. However, the literature in this context provides several partially different definitions.

For instance, Caratelli and Fattobene (2018) define minibonds as debt securities (of any maturity) issued by companies with listed or unlisted shares, following a series of regulatory changes introduced mainly by the "Sviluppo", "Sviluppo-bis" (2012), "Destinazione Italia" (2013) and "Competitività" (2014) decrees. More precisely, the "10° Report Italiano sui Minibond" (2024), developed by the Politecnico di Milano every year on minibond financing, defines this instrument as debt securities (bonds and financial notes) issued (due to the regulatory innovations introduced from 2012 onward) by listed or

unlisted Italian non-financial companies in the form of corporations or cooperatives (excluding banks, insurance companies, and finance companies) amounting to less than €50 million, not listed on stock exchanges open to retail investors. Finally, Proto (2024) defines minibonds as debt securities that can also be issued by SMEs, excluding micro-enterprises, in an amount exceeding twice their equity if they are intended for listing on a regulated market or multilateral trading facility¹, subscribed by professional investors.

What emerges from those definitions are the following characteristics, which can summarize and codify the term “minibond”:

- a minibond is a debt security (usually called “bond” in case of a long-term maturity, or called “financial note” in case of a maturity lower than 36 months) issued by a listed or unlisted non-financial corporation or cooperative;
- the development of this instrument is a result of some Italian regulatory innovations from 2012 onward;
- these regulatory changes permitted access to the debt capital market to the SMEs (not to micro-enterprises), which need to raise a quite lower amount of capital compared to big corporates through bond emissions (therefore explaining the root “mini” of the term, pointing out the usually small size of those emissions).

1.2.1. Background and Regulatory Framework

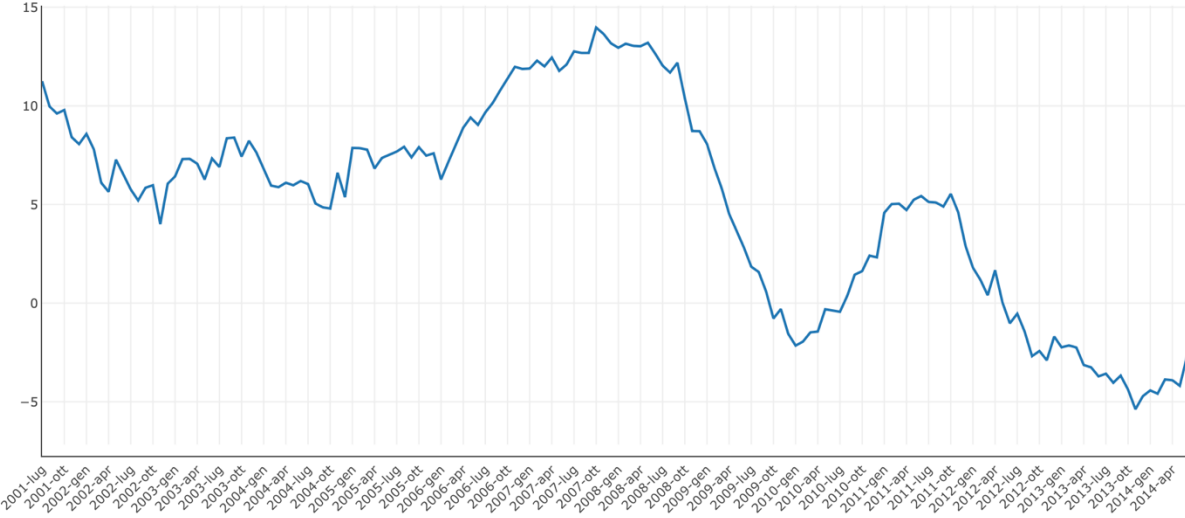
By looking more in the deep into the development of this financial instrument, it is crucial to provide a brief historical background and explore the regulatory innovation and subsequent consolidation.

As already stated above, the Italian corporate financing landscape has been dominated by bank loans for so long (and still it is). The critical breaking and turning point was reached in the period 2008-2013, when Italy was affected by first the World Financial Crisis, and afterwards the Sovereign Debt Crisis. Specifically, due to the financial crisis in 2008-2009, quite all the banks around the world, as well as in Italy, found difficulties in providing corporates with new financial resources, needed to cope with the deep economic downturn, particularly to highly leveraged companies. This is also known as “credit-church”. However, in Italy, the situation became worse in the immediately

¹ Private trading systems that offer the ability to trade financial instruments listed on an exchange, without regulatory duties of admission and disclosure.

following years because of the mentioned Sovereign Debt Crisis. Indeed, while the banks globally came out quickly from financial difficulties and were able to provide capital to corporates, Italian banks were crushed by the enormous amount of Italian public debt securities in their balance sheets, which were affected by speculation during the period 2011-2013 due to the perceived financial unsustainability of Italy's public debt. This situation prevented banks from being able to largely offer capital and produced huge financial distress for Italian companies. Specifically, the most impacted subjects were those which were used to borrow more from the banking system, the SMEs. Figure 1.5 shows clearly the double effect of these two crises on corporate loans to Italian non-financial companies.

Figure 1.5: 12-month rates of change in bank loans to non-financial companies resident in Italy.



Source: Bank of Italy - statistical database

In this context, the first stone was placed by the legislator to open SMEs to the debt capital market.

Indeed, starting from the “Sviluppo” decree (2012) up to the “Capitali” decree (2024), Italian governments have implemented many legislative provisions to make SMEs less dependent on the banking system.

To better present the juridical aspects in this field, it is worth deepening the first two government decrees “Sviluppo” and “Sviluppo-bis”, milestones of the regulatory innovation regarding minibonds.

As reported by Cortese et al. (2016), the “Sviluppo” and “Sviluppo-bis” decrees approved by the Italian Government in 2012 made the civil and tax regulations standardized between listed and unlisted companies so that the issuance of minibond would be

facilitated². Particularly, it is allowed to exceed the limits set by Article 2412 of the Civil Code on bond issues (i.e. those relating to unlisted companies, under which they may not issue bonds in an amount equal to twice their equity), whether bonds issued are intended for listing on regulated markets or multilateral trading systems.

Secondly, regarding the deductibility of interest expense for issuers, under the former provisions, interest expense on bond emissions was not completely deductible for not listed companies. With the subsequent regulatory modification, for bonds issued by unlisted companies, excluding banks and microenterprises, and traded on regulated markets or multilateral trading facilities, interest expense became fully deductible³.

Thirdly, the decrees also expanded the validity of the tax regime on interest received by investors to include corporations, whose securities are traded on multilateral trading facilities, and unlisted companies⁴. Specifically, the recipient of the interest will bear:

- a substitute tax at the rate of 26% if it is an individual or a noncommercial entity or company;
- no withholding tax if it is an enterprise-corporate or commercial entity-resident in Italy, or if it is a subject resident in states and territories that allow adequate exchange of information.

Finally, perhaps the most relevant benefit introduced is that of the deductibility of issuance expenses in the year in which they are incurred. Indeed, as it will be reported in the following paragraph, there are many subjects involved during the issuance of minibonds to whom a fee must be paid (arranger, advisors, rating issuers, placement fees, professional fees, and so on).

Another aspect to be taken into consideration is the introduction of ExtraMOT PRO in 2013 (now rebranded Euronext Access Milan), which has been one of the main innovations that contributed to the development of minibonds. As stated by Borsa Italiana, it is the Professional Segment (which means that only professional investors can trade) of

² Previously, the limit on bond issues for unlisted firms was set equal to the sum in total not exceeding twice the shareholders' equity. This limit could be exceeded, as well as for issues by companies with listed shares, if the excess bonds issued were intended for professional investors subject to prudential supervision.

³ The previously provided deductibility limits were then finally removed in 2015 by the "Internazionalizzazione" decree. Therefore, following this, all bond issues are subject, for the issuer, to the interest expense deductibility limits established by Article 96 of the Tuir.

⁴ Article 21 of Decree 91/2014 extended the exemption from withholding tax also to bonds and similar securities that are not traded on regulated markets or multilateral trading facilities, provided they are held by one or more qualified investors.

the ExtraMOT market (now Euronext Access Milan) dedicated to the listing of bonds (including convertible bonds whose shares resulting from conversion are traded in a regulated market), promissory notes, equity instruments and project bonds. With it, the aim was to create a secondary market on which minibonds could be traded, and in this way encourage the issuance of debt securities for SMEs as well.

To sum up, it seems that the legislator in 2012 tried to act both on the demand and supply side of minibonds. Specifically:

- it removed the juridical limits on bond emissions to SMEs therefore encouraging SMEs to use that corporate financing instrument by “clearing the road” from normative constraints;
- it made the minibonds’ emissions more convenient thanks to the tax deductibility of both the interest expenses and the other issuance expenses;
- it developed a specific secondary market segment (the ExtraMOT PRO, now Euronext Access Milan) in order to permit the exchange of such securities among investors, increase the instrument’s liquidity and the issuer’s information disclosure;
- it made investments in minibonds more convenient thanks to the expansion of the validity of the tax regime on interest (26% of substitute tax).

Many other normative provisions have been approved from 2012 onward regarding minibonds, which have further improved what was previously introduced. The following table is provided for an in-depth analysis of the main regulatory changes.

Table 1.1: Italian regulatory framework on the minibond topic.

Decree	Main innovations
D.L. 83/2012 "Sviluppo" and D.L. 179/2012 "Sviluppo-bis"	<ul style="list-style-type: none"> • Eliminated the maximum quantitative limits previously provided by Article 2412 of the Civil Code for bonds, under certain conditions. • Extension to unlisted companies of the deductibility of interest expense, for securities listed on multilateral trading facilities and subscribed by qualified investors holding no more than 2% of the share capital. • Deductibility of issuance costs for unlisted companies. • Exemption of withholding tax on income for securities listed on multilateral trading facilities of EU member states or “White List” countries.

D.L. 145/2013 "Destinazione Italia"	<ul style="list-style-type: none"> • Simplification of securitization⁵ procedures and greater protection for investors. • Bonds, collateralized securities, shares of minibond funds admissible as assets to cover insurance technical reserves. • Possible guarantee of collateralized securities issued by banks, also of corporate securities and loans to SMEs. • Extension of the activity of the "Fondo Centrale di Garanzia" also to funds for investments on individual issues and portfolios.
D.L. 91/2014 "Competitività"	<ul style="list-style-type: none"> • Elimination of withholding tax on medium- to long-term loans granted by foreign funds and insurance companies. • Elimination of withholding tax on interest and income from obligations including those not listed in multilateral systems, provided they are placed by institutional investors. • Extension of withholding tax to transfers of secured loans.
Law 145/2018 ("Legge di Bilancio 2019")	<ul style="list-style-type: none"> • Amendment of the regulations on PIR (Piani individuali di risparmio a lungo termine). • Amendment of Law 130/99 on securitizations. • Faculty for Consob-authorized equity crowdfunding platforms to place minibonds to professional investors in a dedicated section.
Law 157/2019 ("Decreto Fiscale 2020") and Law 160/2019 ("Legge di Bilancio 2020")	<ul style="list-style-type: none"> • Further changes in PIR regulations.
D.L. 18/2020 ("Cura Italia") and D.L. 23/2020 ("Liquidità")	<ul style="list-style-type: none"> • Extension of public guarantees on minibonds. • New 'Garanzia Italia' measure managed by SACE (now terminated).
D.L. 34/2020 ("Rilancio")	<ul style="list-style-type: none"> • Introduction of 'alternative PIR'.
D.L. 73/2021 ("Sostegni-bis")	<ul style="list-style-type: none"> • Introduction of a "Fondo di Garanzia" section to support traditional or synthetic securitization of minibond portfolios (operational from 2023).
EU Regulation 2020/1503 European Crowdfunding Service Providers (ECSP)	<ul style="list-style-type: none"> • Ability for authorized operators of crowdfunding services for enterprises to place minibonds to even non-professional investors.
Law 21/2024 ("Legge Capitali")	<ul style="list-style-type: none"> • Amendments to the regulations on the issue cap for corporations. • Subscription and circulation of minibonds issued by "Srl" companies also among unsupervised professional investors.

Source: Entrepreneurship Finance & Innovation Observers (2024). *10th Italian Minibond Report*. Politecnico di Milano.

1.2.2. Issuing process

According to Erzegovesi et al. (2016), even if all the activities within the issuing process can be placed inside a *continuum*, four main steps can be distinguished: origination, bond loan structuring, emission, and listing. In the following paragraphs, the different phases are outlined.

⁵ A structured finance technique, through which an entity holding financial assets transfers them, for payment and *pro-soluto* to a Special-Purpose-Vehicle, which finances this acquisition through the issuance of bonds-notes placed on the financial markets. Investors purchasing these securities will be repaid principal and interest through the cash flows from the transferred loans that have matured.

1.2.2.1. Origination

The operation's origination represents the first crucial moment during a minibond issuance since it defines the reasons behind the emission and includes reflections and analyses on the business objectives that the management pursues, benefits and costs, as well as the essential features of the emission.

However, this phase begins with the genesis of the idea of issuing minibonds. There are two main cases that can be recognized:

- the “promising issuer” is a well-structured company, with a developed and expert finance function inside. In this case, usually the idea of issuing a minibond emerges from the financial director, who needs financial resources to implement the business plan;
- the “promising issuer” is a family-managed company, with a relatively small size and a not-structured and expert financial function (sometimes neither precisely defined). In this case, the idea of issuing a minibond comes from an external advisor (usually a bank, with whom the company has a long-standing relationship).

Generally, the second case is the most common for Italian SMEs, which tend to have poor financial knowledge, a relatively small size, and a family-managed business.

Once the input to issue minibonds is given, the actual origination phase begins. The first step is to define the objective of the emission. For instance, it can be ensuring short-term liquidity and financing working capital, financing a development project (inorganically, through M&A operations, or organically, through the establishment of all the assets relevant to the business expansion), refinancing the current banking debt at better financial and/or non-financial conditions, “showing itself” to investors for the first time and hence potentially opening the door to future extraordinary transactions (such as selling shares to private equity funds, listing shares on regulated public markets with an IPO and so on).

Secondly, with the support of different advisors, a feasibility study needs to be performed. Particularly, it aims to assess compliance with all the legal provisions and the minimum requirements needed for the issuance. Specifically, it assesses the legal form and office (the firm has to be a “società di capitali” in the form of “società per azioni (S.p.A.)”, “società a responsabilità limitata (S.r.l.)” or “società cooperativa o muta assicuratrice”

registered in Italy), size and financial statements (these have to be certified by an accounting firm if the minibonds will be listed).

Thirdly, the issuing company is analyzed by the financial advisor from both a quantitative and a qualitative perspective. More precisely:

- in the quantitative analysis, the current and forward-looking financial situation is analyzed. Particularly, the ability of the enterprise to produce sufficient cash flow to repay the debt is assessed (useful even for loan pricing and rating assignment);
- in the qualitative analysis, the governance aspects are investigated. Specifically, the current management composition and capabilities are analyzed in order to verify its suitability in a more complex financial situation. Moreover, it assesses the presence of an appropriate organizational structure.

Afterward, if all the previous analyses confirm the feasibility of a minibond issuance, the origination phase concludes with the drafting of a business plan.

1.2.2.2. Bond loan structuring

The second step is the operational structuring of the bond loan. In this phase, five main elements have to be defined:

- emission volume: to be consistent with financial needs, firm's size and its riskiness;
- maturity: to be consistent with the business plan time horizon (3 to 5 years);
- amortization: it can be "bullet" if the capital is fully repaid at maturity, or "amortizing" if the capital is repaid progressively. However, both categories foresee coupon payments, that can be paid annually, quarterly, or monthly;
- collateral: minibonds can be backed by collateral (secured minibonds) provided by public entities (such as the State or Regions) or other entities responsible for fostering SMEs' access to credit, liens on assets, and so on;
- covenants: they are constraints, whose noncompliance by the issuing company triggers one or more events designed to safeguard the interest of investors. The respect of financial covenants is the most common in minibonds' emissions, such as the interest coverage ratio (interest expense/EBITDA), net (or gross) debt/EBITDA ratio, leverage ratio (net debt/equity), etc. However, also qualitative covenants can be agreed upon, such as the inability, under certain conditions, to distribute dividends or make extraordinary transactions (such as M&A). If one or

more covenants are not respected, the right to early repayment to creditors could be automatically triggered (plus payment of any penalties).

Sometimes, during the bond loan structuring, the presence of options may also be granted, either to the issuer or to the investor. These can be:

- a call option (callable minibond), if the security can be paid back before maturity at the issuer's discretion (beneficial if the issuer sees the possibility of being able to refinance on better terms, for instance);
- a put option (puttable minibond), if there is a possibility of early redemption at the holder's discretion (useful to the investors who, for some reason, see an advantage in calling for early reimbursement).

Finally, all these elements, with also the analysis of exogenous factors such as macroeconomic conditions, contribute to the definition of the interest rate (variable or fixed) to be paid by the issuer to the inventors.

1.2.2.3. Emission

The third phase of the issuing process is the actual emission. Usually, this is composed of four main steps:

- the fulfillment of some formal aspects, such as the adjustment of statutory provisions, the issuing resolution, and the establishment of ad hoc books and registers;
- the drafting of the bond loan regulations covering its terms and conditions, such as emission volume, emission features (pricing, maturity, underwriting mode, payments conditions, etc.), legislation of jurisdiction, currency, any degree of subordination, interest rate, collateral, covenants, and so on;
- the drafting of the underwriting agreement;
- the production of certain certificates to protect the investor, such as the solvency certificate and the validity certificate;
- the placement of securities among qualified investors (bookbuilding). In this final stage, one of the advisors supporting the issuer (the arranger) promotes the

transaction among investors (through road shows and one-to-one meetings) by drafting and circulating the information memorandum⁶.

1.2.2.4. Listing

The last step in the issuing process is the (eventual) listing of the securities on Euronext Access Milan. The three main steps are briefly outlined below:

- firstly, the issuer has to draft the listing admission document and present the last two financial statements (at least the last of which needs to be audited);
- secondly, the ISIN (International Securities Identification Number, which identifies the financial instrument in the market) has to be requested to the Bank of Italy;
- thirdly, the issuer applies to Euronext Securities Milan (formerly Monte Titoli S.p.A.) for the securities' centralization;
- finally, Borsa Italiana publishes the notice that the security has been issued for trading, and on the second market day thereafter, the minibonds can be traded.

1.2.2.5. The actors involved

As stated by Cortese et al. (2016), all the activities previously mentioned involve three main actors: the issuing company, the arranger, and the "market". However, complementary to these three parties, there is a broad set of different advisors and actors that support the issuance from both the issuing company and the investors' side.

Particularly, the following subjects are distinguished in a minibond emission:

- advisor: usually an investment bank or a consulting firm, which can give the incipit to the origination phase and takes care of all the preliminary activities previously discussed. However, the advisor is crucial since, with its strategic, financial, and coordination capabilities of the multiple actors involved, it supports the issuing company through all stages of the emission;
- arranger: this is the player in charge of the central financial activities, such as the loan structuring, the drafting of the information memorandum, and the securities

⁶ Which usually comprehends: the investment summary and issuer's objectives, market analysis and company positioning, analysis of the enterprise's operations and organizational structure, corporate's historical data, and the business plan.

placement. It also supports the issuing company in the due diligence carried out by potential investors. Usually, due to the overlap of several activities, the advisor and arranger are the same entity (particularly in the case of a banking advisor);

- law firm: it deals with the legal due diligence of the issuer, the verification of compliance with regulations, the correctness of procedures and implementation of contracts between the parties, and the proper drafting of the Loan Regulations;
- rating agency: the rating release is not mandatory for the placement of minibonds. However, issuers (rating solicited) or investors (rating unsolicited) may request it;
- agent bank: it deals with the settlement and payments between issuer and investors through Euronext Securities Milan;
- custodian bank: handles the custody of securities;
- Euronext Access Milan (formerly ExtraMOT Pro): is the segment of the Italian Stock Exchange, reserved for professional investors, especially dedicated to the listing of private placements, SMEs bonds (minibonds), corporate and financial bonds, asset backed securities, and promissory notes, issued by Italian or foreign companies;
- common representative and the security agent: as representatives of investors, they oversee credit by monitoring the proper fulfillment of contractual obligations and managing collateral;
- monitoring agent: in the case of a basket bond⁷, it is responsible for the periodic review of the performance of the portfolio under management.

Finally, there are the investors. For them, some important aspects need to be deepened.

As stated in the 10° Report Italiano sui Minibond (2024), investment in minibonds is typically intended for professional investors, i.e. those who possess the experience, knowledge, and expertise to understand and properly assess the risks of the investment. However, the recent regulatory innovations for “Società per Azioni” do not prevent non-professional investors from investing in minibonds⁸. On the other hand, as far as “Società

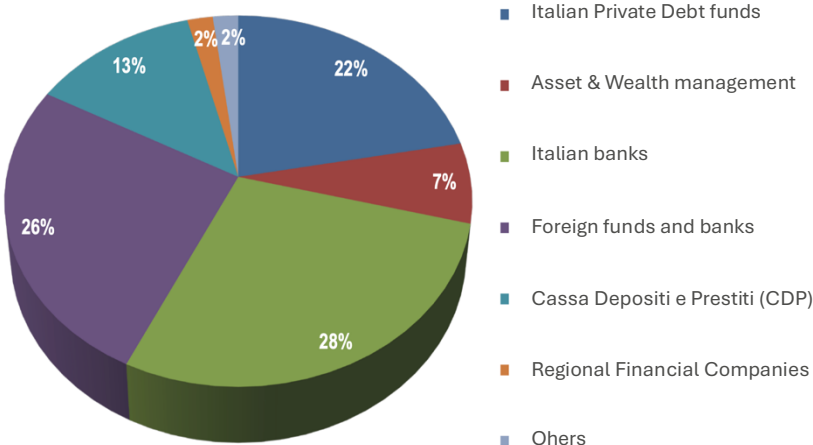
⁷ Since one of the issues related to minibonds is the difficulty in attracting certain types of professional investors (such as foreign ones, who typically consider higher investment tickets), it is possible to resort to “system issuances” involving multiple issuers, resulting in a scheme known as a “basket bond”: companies proceed with issues “synchronized” with respect to maturities, which are fully underwritten by a specially created securitization vehicle, which in turn finances itself in the market with an issuance of asset-backed securities that have individual minibonds as their underlying (10° Report Italiano sui minibond, 2024).

⁸ With the recent revision of the crowdfunding regulations (Regulation (EU) 2020/1503 (ECSP) European Crowdfunding Service Providers), Consob has broadened the range of possible investors. In the case of S.p.A., minibonds can be subscribed not only by professional investors, but also by investors who: hold a

a Responsabilità Limitata” is concerned, until now investment in minibonds has been reserved only for “supervised” investors⁹, who will be jointly and severally liable for the bond if it is sold later to other types of investors. With the “Capitali” Law promulgated in 2024, subscription and subsequent circulation among all professional investors are possible without the obligation of interposition for solvency guarantee purposes by the original investor, if the bonds are intended to circulate only among these categories of investors and this provision appears among the conditions of issue.

Hence, typical subscribers of minibond issues are the "Organismi di Investimento Collettivo del Risparmio" (open and closed-end funds, alternative funds, pension funds), banks, insurance companies, SIMs, regional finance companies, and foundations. Specifically, the figure below shows the investor distribution by type in 2023. The picture that emerges is clear: the largest share of emissions is underwritten by Italian banks.

Figure 1.6: Investors in minibonds in 2023. Coverage of the sample: 80% of the value issued in the market (reworked graphic).



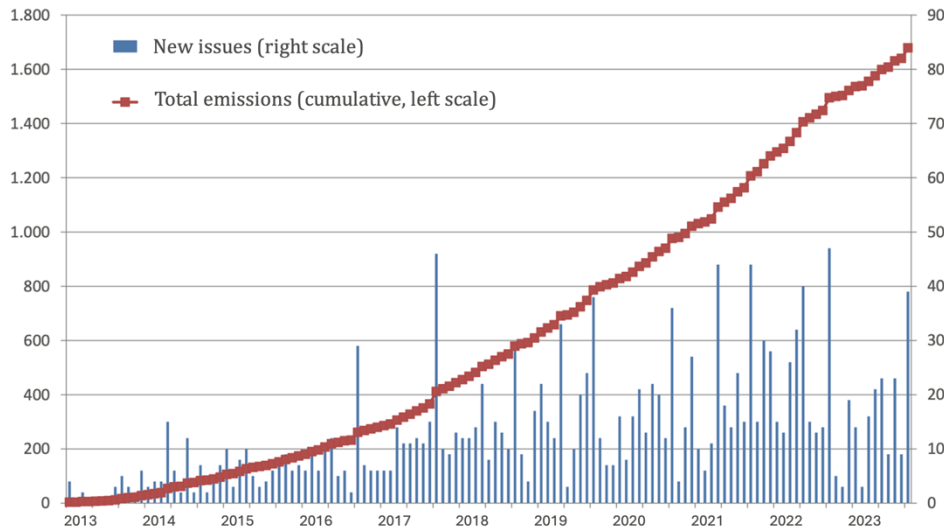
Source: Entrepreneurship Finance & Innovation Observers (2024). *10th Italian Minibond Report*. Politecnico di Milano.

1.2.3. Historical trends

In order to provide a complete overview of the minibond financing, it is useful to analyze the main historical trends on emissions and the features of the issuing companies, surveyed by the “Osservatorio sui Minibond” of the “Politecnico di Milano”. Figure 1.7 shows the time flow of minibond emissions from 2013 to 2023 (for issues under €50 million).

portfolio of financial instruments exceeding €250.000 or undertake to manage at least €100.000 per individual subscription or are assisted by professional investment portfolio managers.
⁹ Banks, SIMs, SGRs, SICAVs, insurance companies and companies registered in the list referred to in Article 107 of the TUB.

Figure 1.7: Time flow of minibond issues from 2013 to 2023 - issues under €50 million (reworked graphic).



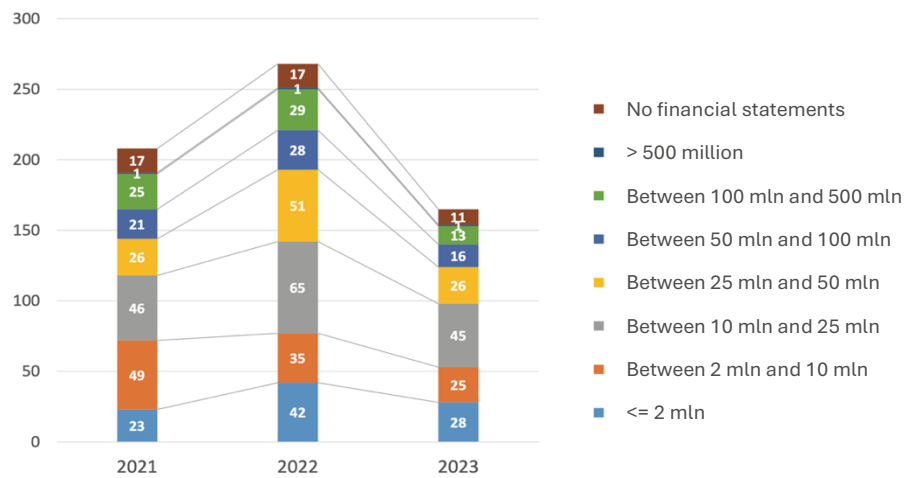
Source: Entrepreneurship Finance & Innovation Observers (2024). *10th Italian Minibond Report*. Politecnico di Milano.

Here, it can be observed that minibond issues have seen sustained growth over the 10-year period considered, reaching €1.7 billion of cumulative emissions in 2023. However, they took more than 6 years to reach €600 million but then only 3 years to double to €1.2 billion. This could suggest that:

- the regulatory measures to expand minibond market may have been successful;
- the favorable financial conditions, and mainly the low interest rates between 2020 and 2022, allowed issuers to finance themselves at a particularly convenient cost, producing a strong acceleration during those years.

By looking more in the deep at the issuing companies, three levels of analysis on the distribution of issuers can be investigated: revenue, industry, and geography.

Figure 1.8: Segmentation of issuing companies by consolidated revenue class: evolution from 2021 to 2023 (reworked graphic).

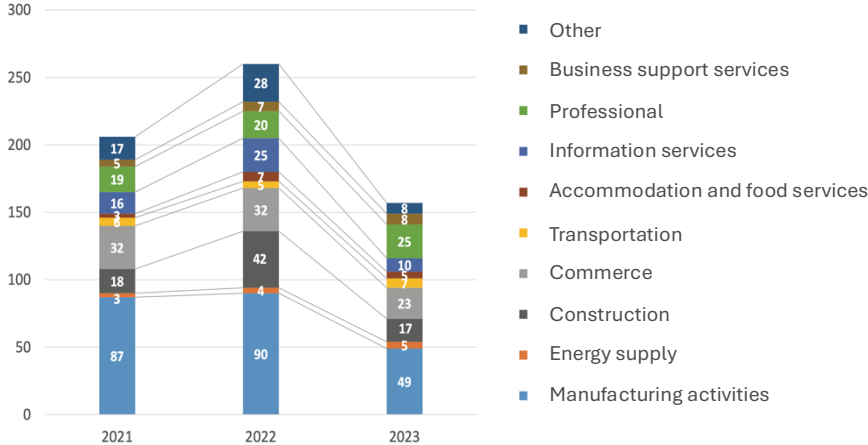


Source: Entrepreneurship Finance & Innovation Observers (2024). *10th Italian Minibond Report*. Politecnico di Milano.

Figure 1.8 presents the segmentation of issuing companies by revenue from 2021 to 2023. The most relevant insights from the illustration are the following:

- 2023 was a year of great contraction in minibond issuance, which, as the chart shows, declined by 38%, from 268 in 2022 to 165 in 2023. The largest decline was for firms with revenues between €100 million and €500 million (-55%), followed by firms with revenues between €25 million and €50 million (-49%). The smallest decline (excluding the ones with more than €500 million in revenues and those without financial statements) was for firms with revenues between €2 million and €10 million;
- the percentage for each revenue range to the total for each year shows a picture of substantial stability in the proportion of emissions. Specifically, the range with the highest proportion of emissions to the total in 2022 and 2023 (second in 2021) is the range between €10 million and €25 million (from 22% in 2021 to 27% in 2023);
- by looking at the cumulative proportion of emissions, it can be noted that emissions from firms under €50 million in revenue account for about 50% of emissions in the three years considered. This figure may suggest that smaller firms are the ones that have recently made more use of minibond financing, and thus benefiting more from the rate conditions of the last few years.

Figure 1.9: Segmentation of issuing companies by business sector: evolution from 2021 to 2023 (reworked graphic).



Source: Entrepreneurship Finance & Innovation Observers (2024). 10th Italian Minibond Report. Politecnico di

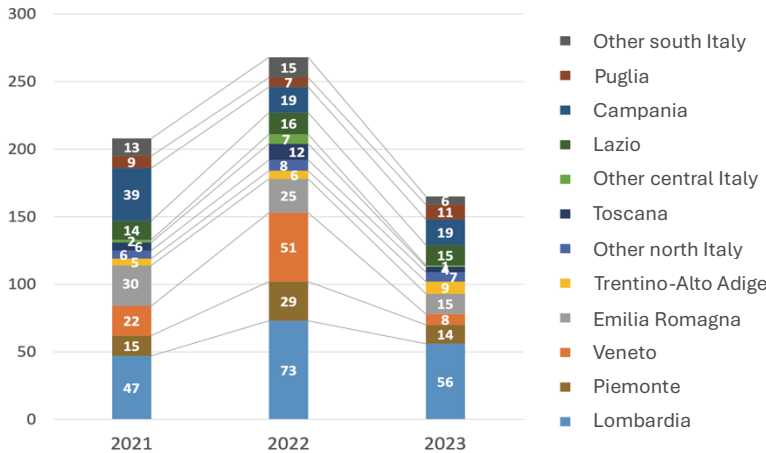
Figure 1.9 presents the segmentation of issuing companies by industry from 2021 to 2023. The first insight that can be observed is that firms dealing with manufacturing activities are the main issuers of minibonds, even if they see a decline compared with total

emissions, from 42% in 2021 to 31% in 2023. Moreover, excluding the decline in 2023 (and 2020), issuance in this sector appears to have a lower growth rate than in other sectors. Indeed, looking at 2019 data (8th Italian Minibond Report, 2019), there were 81 minibond issuing companies in the manufacturing sector, only 10% fewer than in 2022 implying an average annual growth rate¹⁰ of 3.5%. In contrast, other sectors that have driven issuance growth in recent years, such as construction, trade, and information services, showed an average annual growth rate of 91%, 26%, and 36%, respectively, between 2019 and 2022.

However, as also observed by authors of the minibond report, it seems that construction firms in 2023 have exhausted the effect of government incentives on restructuring that had been approved during the pandemic period, which have likely driven the emission growth of that sector.

Finally, bucking the trend in 2023 are business support services, which rose from 7 to 8 (+14%), professional activities, which increased from 20 issues in 2022 to 25 in 2023 (+25%), and transportation, which rose from 5 to 7 (+40%).

Figure 2.0: Geographical location of issuing enterprises: evolution from 2021 to 2023 (reworked graphic).



Source: Entrepreneurship Finance & Innovation Observers (2024). 10th Italian Minibond Report. Politecnico di Milano.

Figure 2.0 presents the geographical location of issuing firms, from 2021 to 2023. The most relevant observation that can be made is that companies located in the north of Italy (Lombardia, Veneto, Piemonte, Emilia Romagna Trentino-Alto Adige, and others) account for more than 60% in the three years, suggesting that the great industrial vocation

¹⁰ CAGR (Compounded Average Growth Rate) calculated as: $(X_n/X_0)^{1/n-1}$

of these areas is a driving force for the entire minibond market. Particularly, Lombardia is Italy's top region for minibond issuing companies, with a share of 34% in 2023 (up as a percentage share, but down 23% as an amount of total emissions). Other northern regions such as Veneto, Piemonte, and Emilia Romagna have seen a boom of emissions in 2022 but a huge decline in 2023, of 84%, 52%, and 40% respectively.

Firms in central Italian regions appear to have historically issued a minority share of minibonds, counting for only about 10% of the total over the 3 years (with only Lazio leading the emissions).

Finally, in the southern regions, a fluctuation between 30% in 2021, 15% in 2022, and 22% in 2023 can be observed with respect to total emissions. In this context, the two regions that stand out in terms of minibonds issued are Campania and Puglia.

1.3. Empirical research on minibonds: prominent literature contributions

The third paragraph of this chapter wants to present some Italian and international literature regarding the minibond phenomenon. Particularly, it aims to present the main contributions empirically tested on minibond financing.

Starting from the general question “what are the minibonds’ impacts?”, the main contribution comes from Angelini et al. (2019) with the paper “Financial Policy of Italian SMEs: The Impact of Mini-Bond”. By quoting the authors “the research analyzes whether the minibonds have actually triggered variations in capital structure, solvency and profitability of Italian SMEs that have issued minibond”. Specifically, they have considered a sample of 246 Italian SMEs’ financial statements from 2012 to 2016, studying the accounting ratios related to financial leverage, solvency, and profitability. The research’s results state that the use of minibonds:

- produces a change in the issuer's capital structure. Particularly, they identified a decline in the debt/equity ratio and an increase in the long-term debt ratio, suggesting that SMEs may use this instrument to consolidate the debt;
- influences positively the short-term solvency level of the issuers, with an increase in cash ratio and current ratio;
- produces a generalized reduction in margins and operating profitability of the issuing companies.

The analysis discovers some contradictory results. Indeed, even if the minibond emissions show a positive impact on some financial ratios, margins, and operating profitability are negatively impacted. It can be supposed that one reason behind this is the increased borrowing costs paid by the issuing company. Yet, the research does not provide enough data to make any firm conclusions.

However, borrowing costs related to minibonds' emissions are deepened by Boccaletti et al. (2022) in the paper "How can SMEs signal their quality and growth orientation to the market? An analysis of the cost of Italian corporate mini-bonds". They tried to disclose the factors producing a higher cost of debt for a minibond issuer. Specifically, they studied 220 minibonds listed in Italy between 2013 and 2017 to examine determinants of yield spreads. The study highlights that the SMEs involved are generally debutants in issuing debt securities and therefore highly opaque and inexperienced in raising funds from nonbank lenders, with evident consequences on the cost of debt. The study primarily shows that:

- the presence of tangible fixed assets (owned by the issuing company) is the most important signal for reducing firms' information opacity and thus the yield spread (more effectively than SMEs' age, size, or specific guarantees on the bond contract). Particularly, an increase of 1% in the tangible asset ratio (tangible assets over total assets) reduces the yield spread by nearly 0.02%;
- issuers stating in their minibond prospectuses to finance risky growth projects (e.g. organic growth, M&A, etc.) exhibit a higher cost of borrowing than the issuers that pursue alternative low-risk oriented strategies (e.g. assets substitution, debt restructuring, etc.). Specifically, when the issuing company pursues risky growth projects, the yield spread is 0.91% higher than for issuers with low-risk (no-growth) projects;
- in the case of firms pursuing low-risk business projects, it is less important the contribution provided by a credit rating in reducing information asymmetries, since these strategies are less difficult to evaluate by outside investors and because rating is quite costly for the type of issuers involved. Moreover, rating solicitation in the minibonds market is usually encouraged by arrangers for riskier/more difficult-to-evaluate projects (which also increases the yield spread), since they may be interested in preserving their own reputational capital.

The research mentioned is quite interesting since it provides some suggestions on how first-time SMEs issuers may signal their quality to the market (thereby lowering their cost of funding), and gaining “market visibility” (Boccaletti et al., 2022).

Sticking within the cost of borrowing, one of the most interesting and main contributions to this topic is the European Central Bank working paper “Bank credit and market-based finance for corporations: the effects of minibond issuances”, written by Ongena et al. (2020). Specifically, the impact of minibond issuance on bank credit terms applied to issuing firms is analyzed, comparing new loans granted to issuing firms with bank loans granted to similar non-issuing firms. Indeed, the authors argued that SMEs rely significantly on bank credit due to their opacity to market investors and the potential benefits conveyed by having a personal relationship with the banking institution. The advantage to banks from this personal relationship is that they can collect “soft” information about firms and conduct more accurate monitoring. However, this close firm-bank relationship often entails the possibility that the latter may extract some “monopoly rents” due to their information advantage (and lack of financial knowledge of the firm) resulting from an increase in the firm's funding costs. Against this backdrop, therefore, the paper's authors want to test whether diversification of funding sources through capital markets enables minibond issuing firms to improve their bargaining power against banks in setting credit terms. Moreover, they also study whether this improvement in financial conditions has implications for the performance of these firms, particularly on certain indicators of asset and liability composition, turnover, and profitability. Specifically, they studied 231 minibonds, issued by 148 firms from 2012 to 2016. The research produced two main conclusions:

- first, even though minibonds are more costly than bank debt, issuing firms achieve, after their first issuance, a reduction in interest rates charged by banks (compared to similar non-issuing firms) of 40 basis points for long-term loans and about 28 basis points for advances. However, a significant change in firms’ overall financing costs has not been observed: indeed, the reduction in bank interest rates after the first issuance has been balanced by the higher coupon rates on minibond issuances. In terms of loan volume, issuing firms reduce the amount of credit used by about 35%, suggesting that minibond issues replace some of the previous bank debt;

- second, comparing one year before and two years after the issuance of minibonds, the authors found that issuing firms increased the amount of total assets and fixed assets by 19% and 15%, respectively (particularly, intangible fixed assets). Moreover, although the leverage of issuing firms increases, their share of bank debt in total financial debt decreases, in favor of capital market financing. Turnover and profitability, on the other hand, are not significantly affected.

These results suggest that issuing companies can increase the total amount of financial debt without observing significant changes in their overall financing costs, and indeed seeing bank lending rates reduced. This may be explained by the improved bargaining power with insider banks in setting credit conditions or due to changes in debt composition in favor of long-term debt, which might have enhanced the debt sustainability of issuer firms (Ongena et al., 2020).

In the same field of study, Croce et al. (2024) tried to refine the previous study by analyzing how SMEs' access to bank credit improves after the issuance of a minibond. Particularly, the authors want to understand whether the issuance actually has an impact on access to banking loans for issuers, and what this effect may depend on. With this purpose, they studied a sample of 602 Italian SMEs which issued minibonds from 2012 to 2020 comparing it to a sample of non-issuer firms. The researchers found that:

- minibond issuance does not automatically improve access to credit, but it depends on the issuance's features and the issuers' age, location, and value of collateral. For instance, issuance with lower interest rates and longer maturities provides more benefits to credit access, while a larger emission increases the cost of bank debt, mainly due to the higher leverage;
- emissions which rely on the companies' assets as collateral lead to an increase in the cost of new credit. Particularly, firms with a higher value of intangible assets benefit less from minibonds emissions in taking out bank debt, as they can already rely on a higher value of collateral that is used by banks to counteract information asymmetries;

Moving on to analyze emission volume, a relevant contribution in this field comes from Cerqueti et al. (2024). Particularly, with the paper "Identifying minibonds issued level's determinants to empower companies' funding managerial strategies" they aim to explore the determinants of the level of minibonds issued by Italian SMEs. Specifically,

they have considered the minibond issuances in the period 2020–2021. With this research, they mainly discovered that:

- quite all variables considered as possible drivers of the level of minibonds issued (seniority of a firm at the issuing time, leverage, collaterals, liquidity, profitability, operating cash flow, etc.), except for the sales growth rate, have a real impact on the amount of minibonds issued. However, the most important determinants in the years analyzed (and whatever the measure of the variable to be explained) are seniority, leverage, collaterals, and operating cash flow;
- a high level of issued minibonds is associated with young companies, having a low level of leverage, not a high level of operating cash flow, and a great level of innovation (intangible assets).

By analyzing these results, the scholars state that usually, these features match those of start-ups and thus conclude (unusually) that minibond issuance could be appealing also for all those companies that cannot find resources in the venture capital market.

Finally, looking briefly at minibonds emissions research in other countries, some interesting results come from Mietzner et al. (2017), who analyzed 118 German minibond emissions between 2010 and 2015, comparing the default probability according to a minibond's initial rating with that implied by credit risk models. They claim that competition in the market for ratings of minibonds issued by German SMEs (the so-called "Mittelstand" which can be compared to Italian SMEs in terms of ownership, size, industries, and financing), the economic growth, the investor inexperience, and the market demand for minibonds may have contributed to rating inflation, producing an underestimation of the issuer default risk. In this context, they observed that:

- low-quality firms found the opportunity to obtain debt financing by issuing minibonds;
- high-quality firms had an incentive to use minibond underpricing to signal their quality.

With this research, they suggest that SMEs issuing minibonds should recognize that underpricing can help reduce asymmetric information and signal their quality, which may place them in an advantageous position for subsequent minibond offerings.

CHAPTER 2

ANALYSIS OF MINIBOND ISSUERS IN THE TRIVENETO REGION BETWEEN 2021 AND 2023. A COMPARISON WITH A PREVIOUS ANALYSIS

2.1. Overview of a previous analysis results

The second chapter aims to study some financial/non-financial features of companies in the Triveneto region (i.e. Veneto, Trentino-Alto Adige, Friuli-Venezia Giulia) that issued minibonds between 2021 and 2023. Three different analyses have been performed:

- geographical, industrial, and size characteristics of issuers have been investigated;
- pre-issue year and issue year financial conditions changes have been compared;
- the financial conditions of issuers between 2013 and 2017 have been compared with those of issuers between 2021 and 2023. In this regard, the main objective is to identify whether the changing macroeconomic context has altered the financial conditions that a firm must meet to issue minibonds.

In order to perform these analyses, a previous dissertation has been studied and revised. Specifically, the financial conditions considered and compared come from the final thesis of a former Ca' Foscari University student, Luca Benvenuti. The dissertation titled "*I minibond come strumento di finanziamento per le aziende del Triveneto*" was drafted in the 2017/2018 academic year and it aimed "to illustrate the minibond instrument as a viable alternative to the banking channel, enabling companies to diversify their sources of financing for better financial management" (Benvenuti L., 2018). Through the construction of an Excel model, he has analyzed financial/non-financial features of a sample of 74 companies based in the Triveneto region and issuing minibonds between 2013 and 2017. The following results have been observed:

- over the time period considered, with 38 emissions, Veneto is the region where the instrument seems to have been most widespread. In the second place, there is Trentino-Alto Adige with 28 companies issuing minibonds. Finally, Friuli-Venezia Giulia reports only 8 issues;
- the industry most represented is manufacturing (55% of the sample), followed by enterprises producing water supplies (multi-utilities) and those engaged in retail and wholesale trade, 15% and 9% of the sample respectively;

- regarding the company size, 46% of firms have more than 250 employees while 41% have between 50 and 249 employees. Less than 15% of the sample has fewer than 50 employees. By looking at turnover, 29% of the sample has a turnover between €100 and €500 million, followed by firms with a turnover between €25 and €50 million (23%) and between €50 and €100 million (19%). Slightly more than 20% of the firms have a turnover between €2 and €25 million while 5 firms exceed €500 million in turnover.

Furthermore, Benvenuti's thesis provides a deep dive into the financial condition of issuing companies before and after the emission in the time period considered. Particularly, the following indexes were analyzed:

- EBITDA/TURNOVER (%): since EBITDA indicates the potential cash flow generated by core operations, by relating it to sales it is possible to identify how much of sales is potentially turned into cash, as well as providing an initial indication of corporate profitability;
- NFP¹¹/EQUITY: it makes possible to assess the proportion existing between financial debts, net of available financial assets, and shareholders' equity to cover the needs generated in net invested capital. It thus represents a particularly useful index for having information related to the robustness of the capital structure;
- NFP/EBITDA: it indicates the expected number of years required to zero out the firm's net financial position under the assumption that it will be able to replicate, even for future years, the EBITDA generated by the firm in the year;
- NFP/TURNOVER (%): it expresses the company's ability to cover debt through cash flows from sales;
- SHORT-TERM FINANCIAL DEBT/TOTAL FINANCIAL DEBT¹² (%): it defines the share attributable to short-term financial debt;
- LONG-TERM FINANCIAL DEBT/ TOTAL FINANCIAL DEBT (%): it defines the share attributable to long-term financial debt;

¹¹ Net Financial Position.

¹² Benvenuti's dissertation expresses these ratios as SHORT-TERM (and LONG-TERM) FINANCIAL DEBT/NFP (%). However, the results he obtained are not consistent with this formula. It has been assumed that it was actually a wording mistake. Therefore, it is presented here with "Total Financial Debt" in the denominator.

- EBIT/FINANCIAL EXPENSES: it indicates the degree of coverage that operating income can provide for the cost of financial resources (if lower than 1 likely means negative net income);
- NET WORKING CAPITAL/TURNOVER (%): by comparing the value taken by this ratio over time, it is possible to see whether the working capital is under control by the enterprise.

From the research conducted with his thesis, Benvenuti observed that issuing companies were healthy before the issuance and were strengthened after the issuance. Briefly, it was observed that:

- the instrument enabled growth in profitability (EBITDA/TURNOVER ratio) as well as a significant growth in turnover;
- regarding net financial debt, this was lower at the end of 2017 and consequently allowed for an improvement in the NFP/EQUITY, NFP/EBITDA, and NFP/TURNOVER ratios;
- a more consolidated financial structure has been observed: there has been a decrease in the SHORT-TERM FINANCIAL DEBT/TOTAL FINANCIAL DEBT ratio and an increase in the LONG-TERM FINANCIAL DEBT/ TOTAL FINANCIAL DEBT ratio. The EBIT/FINANCIAL EXPENSES indicator has also improved;
- finally, the NWC/TURNOVER indicator increased, suggesting a potential worsening in working capital management.

2.2. Empirical analysis of minibond issuances in the Triveneto region

2.2.1. Methodology and sample

In order to perform the analyses mentioned at the beginning of the previous paragraph, the below phases have been followed:

- review of 2021, 2022, and 2023 Italian minibond issuers lists available in the 8th, 9th, and 10th Italian Minibond Report, drafted by Politecnico di Milano Entrepreneurship Finance & Innovation Observers;
- selection of minibond issuers with legal headquarters in the Triveneto region¹³;

¹³ Selection has been carried out by checking the information on firms' websites or on Ufficio Camerale website, as well as by verifying online any data available on the minibond emission (e.g., BeBeez website).

- download of financial statements and any other available information from the AIDA database¹⁴ for each company selected;
- creation in Microsoft Excel of a list with all the selected firms and assignment of Province, Region, VAT code, ATECO code, ATECO description, and month-year of emission to each company¹⁵;
- assignment to each company the financial statements data in columns for both the pre-emission and emission years;
- analysis of geographical, industrial, and size features with pivot tables and graphs;
- calculation for each firm of the eight financial ratios mentioned in the previous paragraph for both pre-emission and emission years;
- comparison between:
 - average of financial ratios results of the three pre-emission years with the average of the three emission years;
 - average of financial ratios results of each pre-emission year with the average of each corresponding emission year;
 - average of financial ratios results of each of the three pre-emission years;
 - average of financial ratios results of 2021-2023 pre-emission years with the average of the same financial ratios results of 2013-2017 pre-emission years found in Benvenuti's final dissertation.

The sample identified is composed of 97 companies. The table in the appendix shows all these firms and the corresponding month-year of emission.

2.2.2. Critical review of the analysis results

2.2.2.1. Geographical features

As shown by the figure 2.1, with more than 70% of emissions, the Veneto region turns out to have the most minibond issues in all three years. This could be attributable to the wider

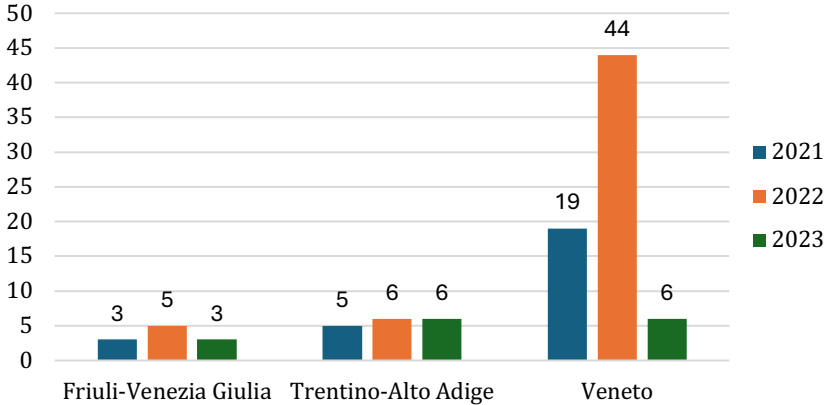
¹⁴ "Analisi Informatizzata delle Aziende Italiane", database managed by Bureau van Dijk.

¹⁵ In case of multiple emissions in the same year, only the first one has been considered. Moreover, the companies falling into one of the following cases have been excluded from the sample:

- firms without available financial statements;
- firms the alleged issuance of which is not accounted for in the financial statements (neither in balance sheet, nor in explanatory note);
- firms the issuance of which has been performed in a year different from those considered.

presence of industrial activities compared with Trentino-Alto Adige and Friuli-Venezia Giulia.

Figure 2.1: Geographical distribution in the Triveneto region of minibond emission in the last three years.



Source: AIDA (personal elaboration).

From the figure, it can be observed the huge impact of post-pandemic macroeconomic conditions changes (which will also emerge from subsequent analyses). Indeed, by looking at the Veneto region, it can be appreciated that between 2021 and 2022 minibond emissions more than doubled. This could be traced back to two main reasons:

- a still expansive monetary policy (at least until the second half of 2022) with low interest rates as well as other ECB programs in place, with the aim of reducing funding costs and increasing credit in the Euro area in the post-pandemic stage (e.g., the pandemic emergency purchase programme, PEPP). This has prompted companies to refinance/acquire financial resources at a very low funding cost;
- the post-pandemic economic boom. Indeed, after the lockdown in 2020 and 2021, 2022 has been characterized by the reopening of many economic activities and a sharp increase in market demand. This has boosted the economic outlook of companies, incrementing the investors’ risk-return appetite on minibond issuers.

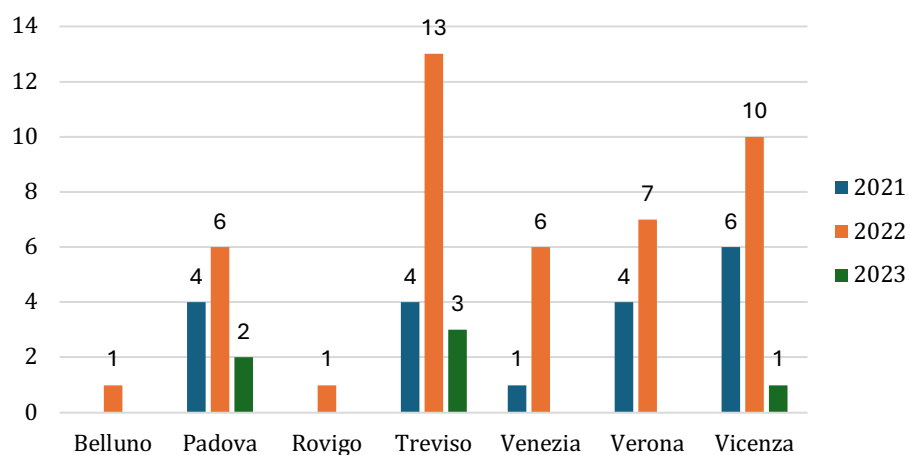
However, by looking at the pre-pandemic data, it can be observed that the market trend is positive but at a lower intensity. Indeed, in 2019 minibond emissions in the Veneto region were 40, only 10% less than the 2022 level.

Another takeaway from the figure 2.1 is opposite to what is stated above. Particularly, it can be observed that in the Veneto region the minibond emissions dramatically decreased in 2023. This could be traced back to the restrictive monetary policy of the ECB. Indeed, interest rates have been increased by ECB in order to face the significant growth

of inflation, caused by the post-pandemic economic boom between 2022 and 2023. This caused an increase in funding cost, thus reducing the propensity for minibond issuance.

Finally, to briefly deep dive the Veneto region issuers, the figure 2.2 shows how firms in the Treviso province seem to be the keenest to issue minibonds.

Figure 2.2: Geographical distribution in the Veneto region of minibond emission in the last three years.



Source: AIDA (personal elaboration).

2.2.2.2. Industrial features

Table 2.2: Industrial distribution in the Triveneto region of minibond emission in the last three years.

Industry	2021		2022		2023		Total	
	n. emissions	percentage	n. emissions	percentage	n. emissions	percentage	n. emissions	percentage
Manufacturing activities	15	56%	25	45%	8	53%	48	49%
Wholesale and retail trade; repair of motor vehicles and motorcycles	5	19%	5	9%	1	7%	11	11%
Construction	1	4%	5	9%	3	20%	9	9%
Water supply; sewerage, waste management, and sanitation activities	1	4%	6	11%	0	0%	7	7%
Information and communication services	1	4%	3	5%	0	0%	4	4%
Accommodation and food service activities	1	4%	3	5%	0	0%	4	4%
Professional, scientific, and technical activities	0	0%	2	4%	1	7%	3	3%
Transportation and storage	1	4%	1	2%	0	0%	2	2%
Arts, sports, entertainment, and recreation activities	1	4%	1	2%	0	0%	2	2%
Health and social work	1	4%	1	2%	0	0%	2	2%
Real estate activities	0	0%	2	4%	0	0%	2	2%
Agriculture, forestry, and fishing	0	0%	1	2%	0	0%	1	1%
Financial and insurance activities	0	0%	0	0%	1	7%	1	1%
Supply of electricity, gas, steam, and air conditioning	0	0%	0	0%	1	7%	1	1%

Source: AIDA (personal elaboration).

Table 2.2. shows the industrial distribution of minibond issuers in the Triveneto region during the period 2021-2023. In addition to the overall emissions development presented in the previous paragraph, here it can be observed that the most prominent minibond issuance sector is the manufacturing industry. Indeed, it counts for 56% in 2021, 45% in 2022, and 53% in 2023, suggesting the great magnitude of this sector in the industrial network of the Triveneto region. By deepening this industry on the related fields, three main sub-sectors in the region seem to have been the most active in minibond emissions during the last three years:

- the manufacturing of metal products (excluding machinery and equipment), with 17% of the industry emission (from 7% in 2021 up to 25% in 2023). Specifically, the most active in emissions have been firms classified as operating in “general mechanical work” sub-sector;
- the manufacturing of machinery and equipment, with 10% of the industry emissions. Particularly, five different sub-sectors are represented in the sample:
 - manufacturing of other general-purpose machinery;
 - manufacturing of other special-purpose machinery (including parts and accessories);
 - manufacturing of apparatus for purifying and filtering liquids and gases for non-domestic use;
 - manufacturing of machinery for the food, beverage, and tobacco industry (including parts and accessories);
 - manufacturing of agricultural tractors;
- fashion and apparel, with 10% of the industry emission (but with a decreasing trend, from 20% in 2021 to 0% in 2023).

The second most represented industry is the wholesale and retail trade, with 11% in the three years considered, even if it has a negative trend (19% in 2021, 9% in 2022, and 7% in 2023). Regarding the related sub-sectors, data states that wholesale trade (excluding that of motor vehicles and motorcycles) is more represented than retail (64% vs. 9% of the industry emissions).

The third most represented industry is construction, with 9% in the three years considered. This industry has particularly benefited from the so-called “110% superbonus”, a government measure approved in 2020 to face the industry crisis due to pandemic

economic consequences. The construction industry has therefore been boosted by this measure and so have corporate minibond emissions.

Finally, the table below compares the data presented with the incidence of the various industries on Triveneto's economic network.

Table 2.3: Comparison of total emissions between 2021 and 2023 and the incidence of industries on the Triveneto's economic network.

Industry	Total emissions %	Industry incidence ¹⁶	Delta %
Manufacturing activities	49%	32%	+54,2%
Wholesale and retail trade; repair of motor vehicles and motorcycles	11%	23%	-50,4%
Construction	9%	15%	-38,2%
Water supply; sewerage, waste management, and sanitation activities	7%	1%	+625,6%
Information and communication services	4%	2%	+100,7%
Accommodation and food service activities	4%	5%	-20,6%
Professional, scientific, and technical activities	3%	4%	-19%
Transportation and storage	2%	5%	-56,7%
Arts, sports, entertainment, and recreation activities	2%	1%	+190,7%
Health and social work	2%	2%	+16,6%
Real estate activities	2%	3%	-33,7%
Agriculture, forestry, and fishing	1%	2%	-31,6%
Financial and insurance activities	1%	1%	+7,9%
Supply of electricity, gas, steam and air conditioning	1%	1%	-4,4%
Others	n.a.	4%	n.a.

Source: AIDA (personal elaboration).

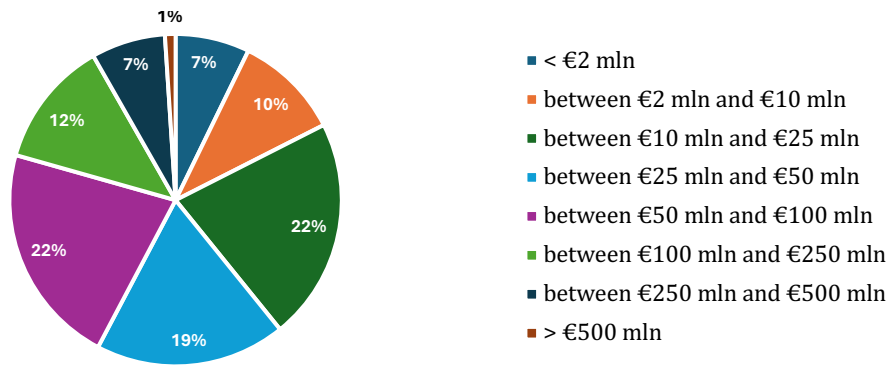
The table captures an industrial composition of the Triveneto region that is very similar to that of the sectors targeted by minibond issuance in the past three years. Interestingly, the “water supply, sewerage, waste management, and sanitation activities” industry in the last three years has been particularly lively in issuing minibonds compared to its incidence on the Triveneto's economic network (7% vs. 1%).

2.2.2.3. Size features

Figure 2.3 shows the size distribution of the minibond issuing firms between 2021 and 2023 in the Triveneto region. In this case, the distribution has been measured with turnover, calculated by adding “A1. Revenue from sales and services” to “A5. Other revenues”.

¹⁶ Calculated as: “Total Triveneto firms with 2023 revenues > €1 million belonging to the sector/Total Triveneto firms with 2023 revenues > €1 million”

Figure 2.3: Size distribution (turnover) in the Triveneto region of minibond emission in the last three years (percentage).

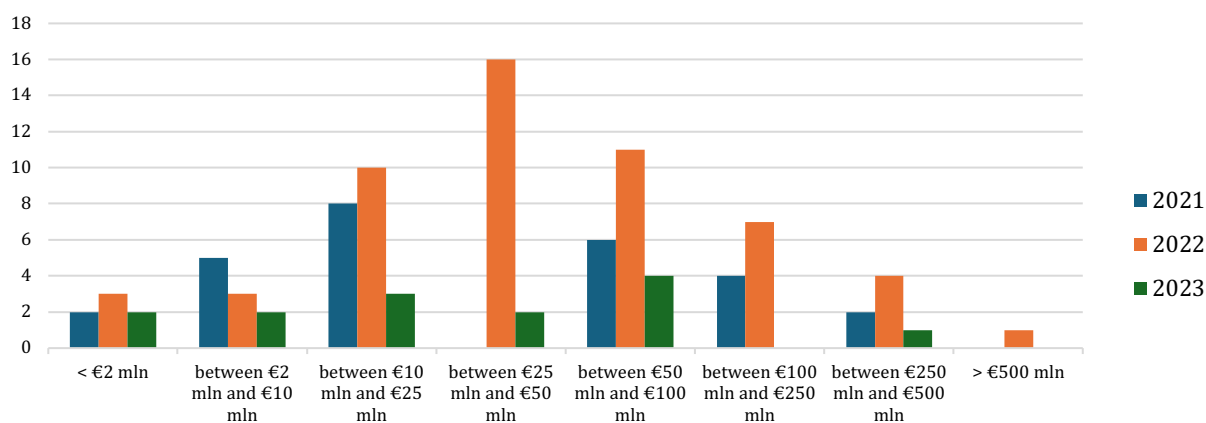


Source: AIDA (personal elaboration).

From the figure, it can be observed that firms with less than €50 million in turnover count for around 60% of all issuing firms. This suggests and confirms the hypothesis that the minibond instrument allows smaller corporates to access the capital market. This observation is even stronger if also firms with less than €100 million in turnover are considered. Indeed, they count for more than 80% of all issuing firms between 2021 and 2023. Specifically, the three biggest groups in the sample (counting for more than 50% of all issuing firms) are those with a turnover between €10 million and €25 million, those with a turnover between €25 million and €50 million, and those with a turnover between €50 million and €100 million.

However, by narrowing the analysis within the manufacturing industry (as said, the most represented in the sample) it emerges that the percentage of firms with less than €50 million drops to 50% of the sample. Moreover, if the analysis is made narrower, thus considering only manufacturing activities in the Veneto region, it can be observed that the percentage of firms with less than €50 million is even lower, around 45%, with a higher portion of firms with a turnover between €50 million and €100 million. These last analyses prove that, even if the minibond instrument seems attractive for smaller firms, in the region driving the emissions and within the industry most represented, the higher portion of emissions has been made by relatively larger firms. The reasons behind this phenomenon could be different. For instance, those firms could have a more structured finance department, able to evaluate the issuance's benefits better than smaller firms. Otherwise, they could be more attractive and perceived as more trustworthy by investors, thus enabling them to raise financial resources through the instrument. Finally, it could be an intrinsic feature of the industry considered that of having on average larger firms.

Figure 2.4: Size distribution (turnover) in the Triveneto region of minibond emission by year.

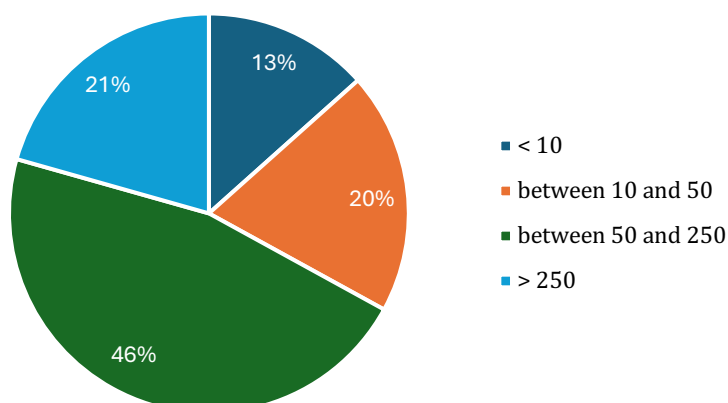


Source: AIDA (personal elaboration).

The figure 2.4 shows how the firms' dimension related to turnover has changed during the three years considered. Particularly, it emerged that most medium-sized companies issued minibonds in 2022, while smaller ones issued the instrument mainly in 2021. As already seen, 2023 saw a significant decline in issuance. The most involved companies in issuing minibonds during that period had a turnover lower than €100 million.

By looking at the figure 2.5 below, the size distribution of issuing firms by employees can be appreciated. Particularly, it emerged that about half of the companies that issued minibonds from 2021 to 2023 had between 50 and 250 employees, thus suggesting their small- medium-sized nature.

Figure 2.5: Size distribution (employees) in the Triveneto region of minibond emission in the last three years (percentage).



Source: AIDA (personal elaboration).

Moreover, by narrowing the analysis only to manufacturing firms, it can be observed an increase in larger firms issuing minibonds. Particularly, the segment of firms with more than 250 employees grows to 23%, while that between 50 and 250 employees rises to 52%. Again, making the breakdown even narrower, thus considering only

manufacturing companies in the Veneto region, it emerged a growth of firms with more than 250 employees (up to 30% of the sample), while the segment of firms with employees between 50 and 250 remains stable at 46%. These observations confirm what was stated on the turnover side: over the past three years, the largest portion of minibonds in the Triveneto region has been issued by small and medium-small companies, however, issues from the leading industry (manufacturing), particularly those from the leading region (Veneto), still mainly involve larger companies.

2.2.2.4. Pre-issue/issue year financial ratios changes

As already mentioned, the averages of the following financial ratios have been calculated¹⁷ for the companies in the Triveneto region issuing minibonds from 2021 to 2023:

- EBITDA/TURNOVER (%)
- NFP¹⁸/EQUITY
- NFP/EBITDA
- NFP/TURNOVER (%)
- SHORT-TERM FINANCIAL DEBT/TOTAL FINANCIAL DEBT (%)
- LONG-TERM FINANCIAL DEBT/ TOTAL FINANCIAL DEBT (%)
- EBIT/FINANCIAL EXPENSES
- NET WORKING CAPITAL¹⁹/TURNOVER (%)

¹⁷ In the calculation of ratios and averages, values were not considered:

- where the Excel cell gave error (e.g., in the case of divisions by zero);
- where no data were available on the EBITDA/Turnover ratio;
- if they represented outliers (removed using the interquartile range method).

¹⁸ NFP has been calculated by adding the following items:

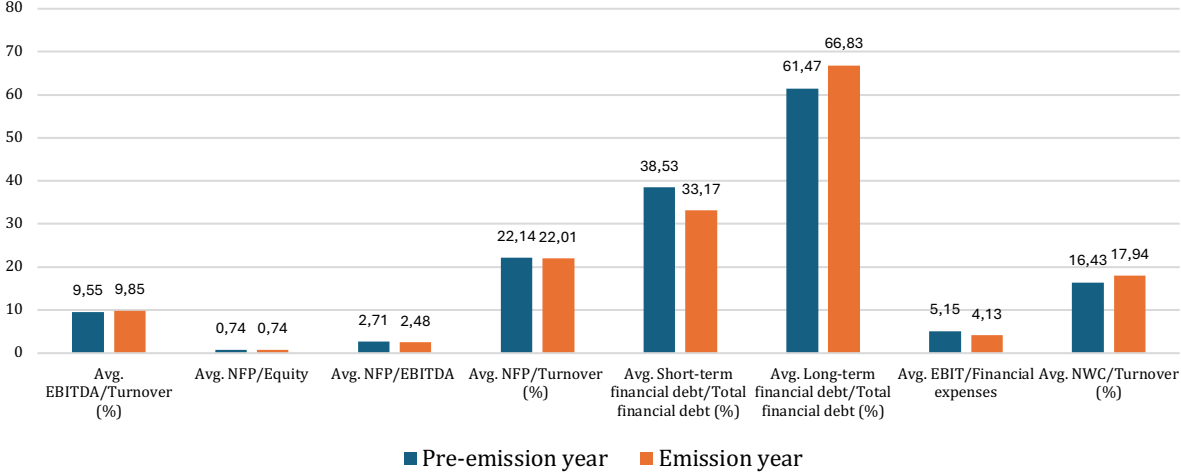
- financial debt = *“(obbligazioni entro + obbligazioni convertibili entro + debiti vs. soci per finanziamenti entro + banche entro + altri finanziatori entro) + (strumenti finanziari derivati passivi + obbligazioni oltre + obbligazioni convertibili oltre + debiti vs. soci per finanziamenti oltre + banche oltre + altri finanziatori oltre)”*
- (-) financial activities = *“(totale crediti imm. finanziarie + altri titoli (imm.) + strumenti finanziari derivati attivi (imm.) + azioni proprie + strumenti finanziari derivati attivi (circol.) + altri titoli (circol.) + attività finanziarie per la gestione accentrata della tesoreria + totale disponibilità liquide)”*

¹⁹ NWC has been calculated by adding the following items:

- trade receivables + inventory = *“(crediti vs. clienti entro + crediti vs. controllate entro + crediti vs. collegate entro + crediti vs. controllanti entro + crediti vs. imprese sottoposte al controllo delle controllanti entro + crediti tributari entro + crediti per imposte anticipate entro + crediti vs. altri entro + totale rimanenze)”*
- (-) trade payables = *“(acconti entro + acconti oltre + debiti vs. fornitori entro + debiti rappresentati da titoli di credito entro + debiti vs. imprese controllate entro + debiti vs. imprese collegate entro + debiti vs. controllanti entro + debiti vs. imprese sottoposte a controllo delle controllanti + debiti tributari entro + debiti vs. istituti di previdenza e di sicurezza sociale entro + altri debiti entro)”*

The first analysis performed aimed to compare the average of financial ratios results of the three pre-emission years with the average of the three emission years. The figure below shows the results obtained.

Figure 2.7: Comparison of the average financial ratios results of the three pre-issue years with the average of the three issue years.



Source: AIDA (personal elaboration).

By looking at the figure 2.7, it can be observed that the minibond emissions:

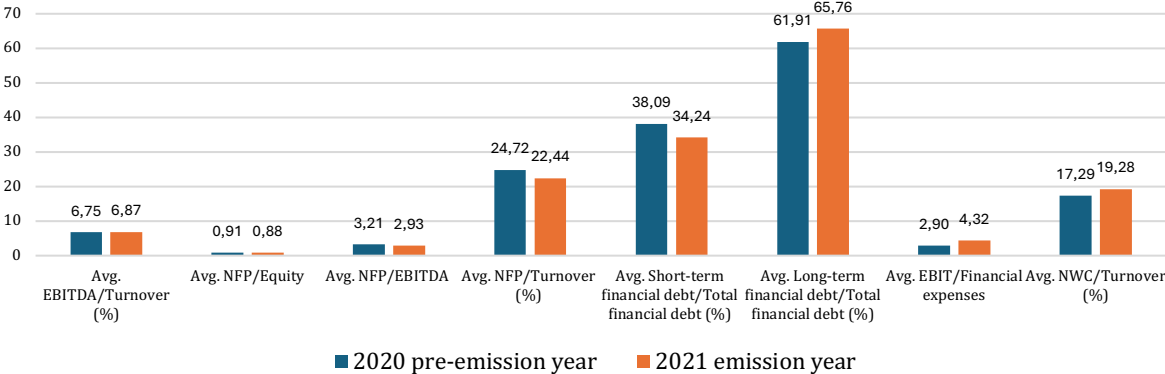
- had no effects on the share of corporates’ margins, indeed, EBITDA% remained steady enough. This can be explained by the fact that any development project, financed by a minibond emission, could not have immediate results on a corporate’s profitability. Secondly, any hypothetical equipment acquisitions are not visible in this ratio since depreciations are excluded from the EBITDA figure. Finally, this ratio could be increased by mainly an efficiency-building process. Therefore, the steady trend of this ratio could suggest a different usage of the new resources;
- related to this last remark, it seems that, in the short-term, the minibond emission mainly had the effect of consolidating the debt, therefore increasing the share of long-term debt and reducing short-term exposures;
- had no effects on the average number of debt payback years. Indeed, the NFP/EBITDA ratio has even decreased;
- had no effects on the NFP/Equity ratio, therefore suggesting that, on average, issuing companies maintained a steady and cautious capital structure.

However, to assess whether the differences in the averages are statistically significant and if these results can be generalized beyond this population, such as other issuers in the Triveneto, or other issuers in the rest of Italy, the results of a paired-samples t-test (with alpha equal to 0.05) is presented in table 2.4 (see appendix). Particularly, the t-test

confirms that in the short term, no significant changes are noted in most of the indexes examined. However, the only significant change is in a purely financial measure related to debt structure, namely short- and long-term financial debt/total financial debt ratios (both of which have a p-value lower than alpha). The t-test in this case confirms that through the issuance of minibonds, firms have reduced their share of reliance on short-term financing. Moreover, the EBIT/Financial expenses ratio also has a very low p-value (in the case of the one-tailed one, it is lower than alpha). Thus, in this case, the deterioration of the index is only partially significant. Indeed, this figure may not be closely related to the issuance of minibonds but may be related to the sharp increase in interest rates that occurred between 2022 and 2023²⁰.

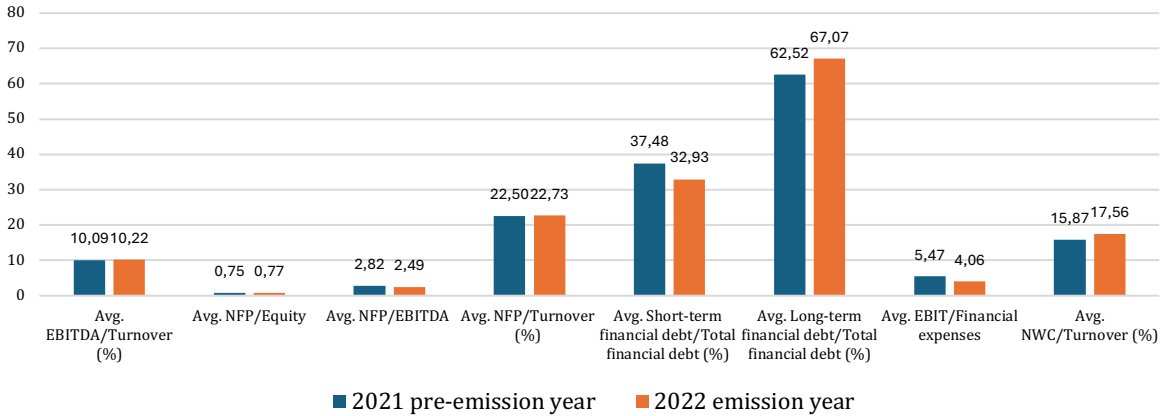
Secondly, the following three figures show the average financial ratio results of each pre-emission year with the average of each corresponding emission year.

Figure 2.8: Comparison of the average financial ratios of 2020 pre-emission year with the average of 2021 emission year.



Source: AIDA (personal elaboration).

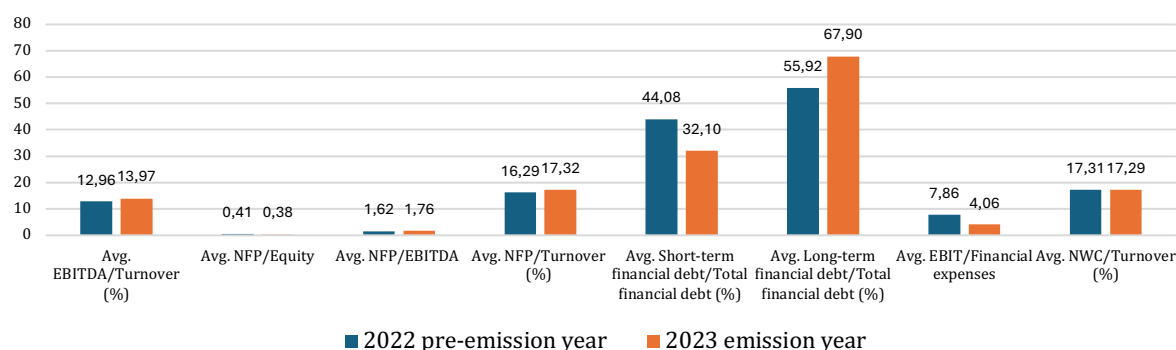
Figure 2.9: Comparison of the average financial ratios of 2021 pre-emission year with the average of 2022 emission year.



Source: AIDA (personal elaboration).

²⁰ To confirm this, it would be necessary to perform a linear regression with another sample of similar companies not issuing minibonds during the same period.

Figure 2.10: Comparison of the average financial ratios of 2022 pre-emission year with the average of 2023 emission year.



Source: AIDA (personal elaboration).

By analyzing the three figures, what is stated above has been confirmed and reinforced. Specifically, it seems that the new debt collected had no dramatic effect on profitability, debt payback years, and capital structure. Furthermore, the debt consolidation process and the deterioration of the financial expenses' coverage ratio can be clearly observed. However, the graphs provide two relevant takeaways:

- the debt consolidation process seems to be increasingly evident year by year. Particularly, the 2023 emission year has been the one with the highest change from short-term financial debt to longer-term financial debt. A reason behind it could be the increase in interest rates between 2022 and 2023. Indeed, it can be supposed that the issuance of new debt to repay existing debt, but with a longer maturity, had reduced the amount of each installment to be paid, thus providing issuing firms with the opportunity to better manage their financial resources in a context of rising cost of funds. It can also be argued that, through the emission of mini-bonds, issuing firms have obtained more convenient repayment terms (e.g., a repayment with “bullet” amortization, which reduces the financial outlay in the short term by paying only the interest portion);
- the interest rates growth between 2022 and 2023 has worsened the EBIT/Financial expenses index²¹. Indeed, this one experienced firstly an improvement between 2020 and 2021, due to the economic recovery, and secondly, a sharp contraction just between 2022 and 2023, due to the increase of interest rates to face inflation. Hence, despite the above-mentioned potential benefits of the new debt

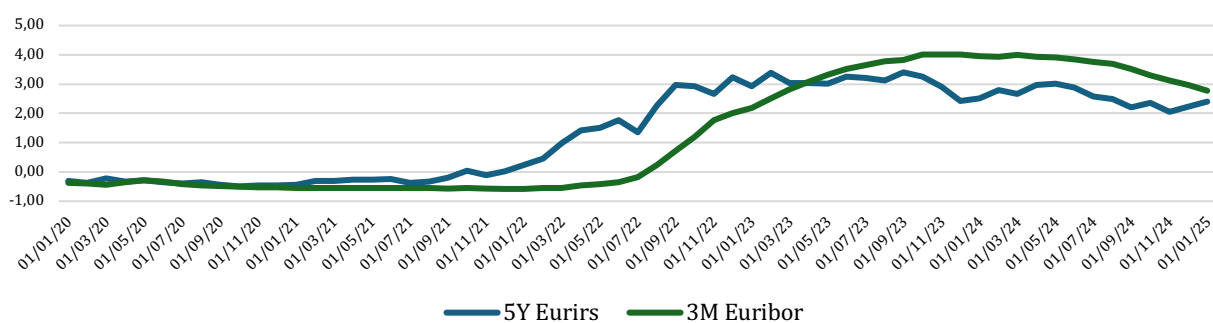
²¹ Another reason of the index worsening could be a decrease of average firms' EBIT. However, by looking at ratios such as EBITDA/Turnover and NWC/Turnover, it does not seem that any dramatic reduction in economic performance have occurred. Therefore, this hypothesis sounds unlikely.

issuances, it can be supposed that those minibond emissions have been undergoing a high borrowing cost for issuing firms²².

What analyzed in this section through the disaggregate analysis is confirmed by the paired-sample t-test (with alpha equal to 0.05) performed. It shows that the differences between the averages of the ratios with a higher degree of statistical significance concern debt structure ratios and the EBIT/Financial expenses ratio. Specifically:

- between 2020 and 2021, there is a strong significance in the change of the EBIT/Financial expenses index. Indeed, the latter can be said to increase mainly due to the post-pandemic economic recovery (since interest rates remain almost stationary in those two years). In contrast, changes in the other ratios appeared insignificant;
- between 2021 and 2022, the worsening in the EBIT/Financial expenses index maintains a high degree of significance. As said, this can be explained by the rising

Figure 2.11: 3-month Euribor and 5-year Eurirs rates (personal elaboration).



interest rates in 2022. Particularly, the figure above shows the two most common reference rates for the interest calculation: the 3-month Euribor for the variable rate and the 5-year Eurirs for the fixed rate. Moreover, it can be supposed that the index has worsened due to higher variable-rate interest charges paid by firms on their existing stock of debt. Furthermore, regarding the averages of short- and long-term financial debt ratios, the t-test shows that the differences are weakly significant. However, since they show an increase in long-term financial debt, by looking at the figure above it can be supposed that some companies have emitted long-term minibond with the aim of raising financial resources at a fixed rate (albeit higher than the variable rate, which, however, was riskier in that macroeconomic environment);

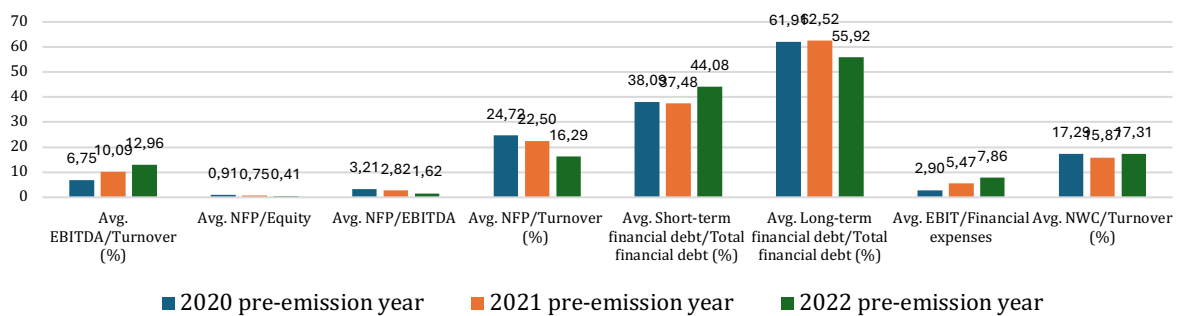
²² However, this one it could have been cheaper than bank debt. Otherwise, it can be supposed that the 2023 issuing firms have not been able to find financial resources through the traditional bank system, therefore they have resorted to the issuance of minibonds even at a higher cost.

- the mentioned results are even more evident through the t-test in the years 2022 and 2023. In this case, the changes in short- and long-term financial debt ratios are definitely more significant, and so is the change in EBIT/Financial expenses ratio.

Hence, the results of t-tests (in the appendix) show even more emblematic the process of debt consolidation through the issuance of minibonds in the three years considered and the impact of the increase in interest rates on the EBIT/Financial expenses ratio.

Finally, the third analysis performed compares the average financial ratios results in each of the three pre-emission years.

Figure 2.12: Comparison of the average financial ratios in each pre-emission year.



Source: AIDA (personal elaboration).

By looking at the figure 2.12, some interesting trends can be observed:

- in the last three years, there was an increase in the average EBITDA/Turnover ratio. This may be due to two main factors. First, from an increase in average overall profitability due to the post-pandemic recovery. Second, it can be assumed that over the past three years, those firms with gradually higher EBITDA% than issuing firms in previous years have succeeded in issuing minibonds. In particular, this last aspect could be caused by the macroeconomic conditions turnaround (growth in inflation and interest rates);
- last three years' emissions show also a general decrease in the beginning indebtedness of issuing firms. Indeed, this can be appreciated by looking at the NFP/Equity, NFP/EBITDA, and NFP/Turnover ratios. All three decreased by 55%, 50%, and 34% respectively. This trend once again may be due to the different macroeconomic conditions that have impacted issuers. Specifically, 2020 issuers likely had higher debt ratios due to poor economic performance caused by the pandemic, which subsequently improved (thus reflected in the three ratios). However, the trend indicates how firms with gradually lower debt ratios managed to issue minibonds over the three years considered. Then, it is useful to point out that the

issuing firms are all firms with a higher degree of long-term financial debt than short-term debt;

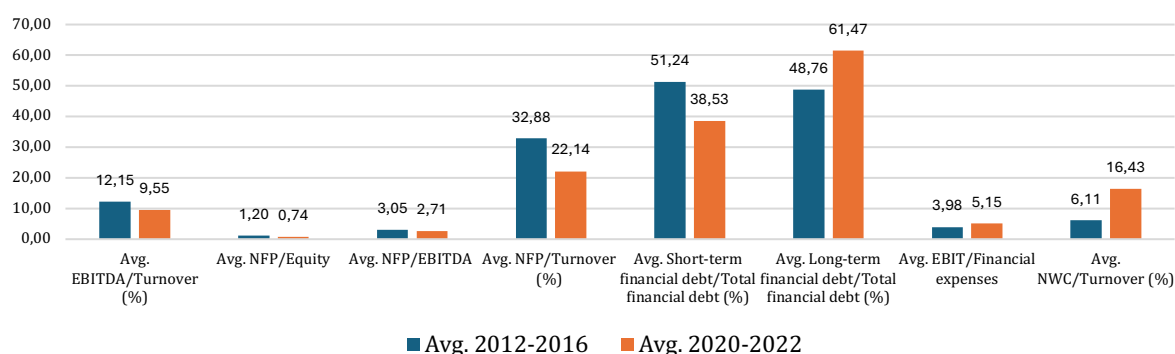
- the increase in profitability is also appreciable from the EBIT/Financial expenses ratio, which grew by 170% in the three pre-issuance years. It is interesting to note that, even in this case, companies with gradually better levels of economic and financial performance have managed to issue minibonds over the three years.

In this case, to assess whether the differences in the averages are statistically significant and if these results can be generalized beyond this population, a simple ANOVA test (with alpha equal to 0.05) has been performed. The results (visible in table 2.8 in the appendix) show that only the differences in the averages of EBITDA/Turnover (%) and EBIT/Financial expenses are statistically significant, thus confirming the first and third considerations stated above. Regarding other ratios, differences in averages seem to be not significant, although the considerations made on debt indexes are certainly plausible.

2.2.2.5. Comparison with the previous analysis

In the above paragraphs, the results of the last three years have been deeply investigated, and some trends regarding changes in the financial features, that a corporate needs to meet in order to issue minibonds, emerged. However, as seen, the various macroeconomic disruptions that occurred between 2020 and 2023 had a significant impact on the data analyzed. Accordingly, to get a much stronger view of current trends, it is worth comparing the average of the data from the last three years with the average of the data between 2013-2017, analyzed by Luca Benvenuti in his final dissertation.

Figure 2.13: Comparison between the average financial ratios results in 2021-2023 pre-emission years with the average of the same financial ratios results in 2013-2017 pre-emission years found in Benvenuti's final dissertation (still in the Triveneto region).



Source: AIDA and Benvenuti L. *I minibond come strumento di finanziamento per le aziende del Triveneto* (personal elaboration).

By looking at figure 2.13, it can be observed how the parameters that allow companies to issue minibonds have evolved over the past 10 years. Particularly, it emerged that:

- the average pre-emission level of debt for minibond issuing firms has decreased significantly. This can be appreciated by looking at NFP/Equity, NFP/EBITDA, and NFP/Turnover ratios. Therefore, it can be inferred that between 2013 and 2017, it was possible to issue minibonds also for companies with higher levels of debt. One reason behind this could be that, in the years immediately following the 2008 financial crisis and the 2010-2011 sovereign debt crisis, SMEs in the Triveneto region were highly indebted and were struggling to raise financial resources through the banking channel²³. Despite that, however, they were able (and found it convenient) to raise financial resources through the issuance of minibonds thanks to the macroeconomic environment of near-zero interest rates and the regulatory innovations that introduced and promoted this instrument;
- issues in the period 2013-2017, appear to have been made by companies with a high imbalance of short-term versus long-term financial debt. Comparing this data with the average pre-issuance data for the 2020-2022 period shows that there has been considerable financial debt consolidation of issuing firms. Particularly, it appears that in recent years the firms that have been able to issue minibonds are those with a larger share of long-term financial debt;
- EBIT/Financial expenses ratio also increased by 30%. This can be explained by the fact that in the post-financial crisis and post-sovereign debt crisis period, Italian companies suffered a sharp decline in profitability, despite the very low interest rates of those years. In contrast, the post-pandemic period not only saw very low rates (at least in the initial phase) but also a sharp increase in profitability;
- the NWC/Turnover ratio, on the other hand, has more than doubled compared to issuances in the 2013-2017 period. This finding points to a likely worsening in the working capital management of issuing firms in recent years. However, it seems that this deterioration is not particularly relevant in allowing the issuance of

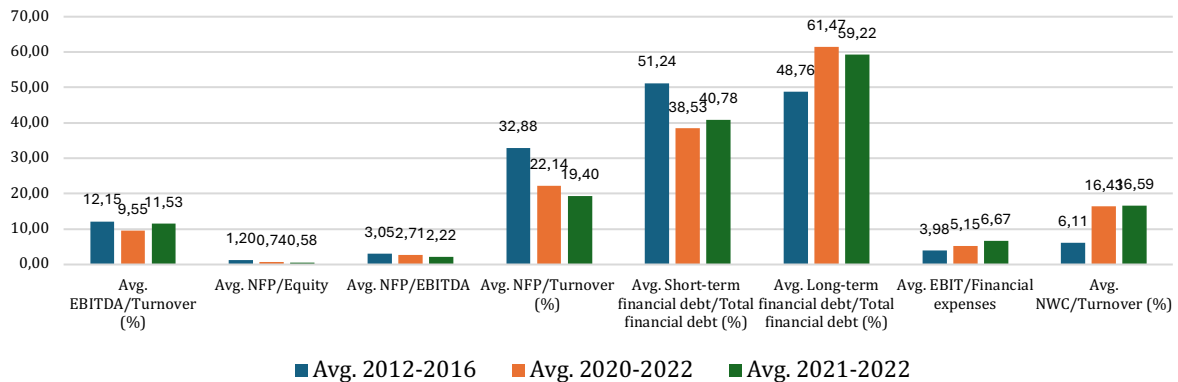
²³ By looking at a Bank of Italy's analysis, represented by the figure 1.2. in the first chapter, it can be seen that between 2011 and 2014 (the year in which the indebtedness of Italian firms began to decline more significantly) indebtedness reached the highest peaks and the average appears substantially larger than the levels in the years between 2020 and 2023. Moreover, figure 1.5 in the first chapter, confirm the aforementioned contraction of bank loans in those years.

minibonds, thus, even firms with higher NWC/Turnover ratios than in the past are able to issue minibonds today;

- finally, by analyzing the EBITDA/Turnover ratio, it seems in recent years, even firms with lower margins than in the 2013-2017 issuance period have managed to issue minibonds.

However, the considerations made so far take into account, with regard to the average pre-issue data for 2020-2022, the year of the pandemic outbreak, which could have affected some of the values considered in the calculation of financial ratios. Instead, the figure below adds the average of the last two pre-issue years to the previous graph.

Figure 2.14: Comparison between the average financial ratios results in 2021-2023/2022-2023 pre-emission years with the average of the same financial ratios results in 2013-2017 pre-emission years found in Benvenuti's final dissertation (still in the Triveneto region).



Source: AIDA and Benvenuti L. *I minibond come strumento di finanziamento per le aziende del Triveneto* (personal elaboration).

This further comparison confirms what was highlighted above. However, it shows how profitability has instead remained slightly unchanged, thus disproving the last point presented.

2.3. Conclusions

In this chapter three different analyses have been performed on 97 minibond issuances in the Triveneto region between 2021 and 2023:

- geographical, industrial, and size characteristics of issuers have been investigated;
- pre-issue year and issue year financial conditions changes have been compared;
- the pre-emissions financial ratios of issuers between 2013 and 2017 have been compared with those of issuers between 2021 and 2023.

In conclusion, below are summarized the key takeaways:

- between 2021 and 2022 there is a doubling in minibond issuance in the Triveneto region. This figure is undoubtedly due to the post-pandemic recovery and the extremely low interest rates. However, between 2022 and 2023, issuances decreased by 73% due to the reversal of macroeconomic conditions, i.e., the high inflation²⁴ and the subsequent increase in interest rates to address it. This trend is found in all three regions examined;
- with 70% of the sample, Veneto is still the leading region for minibond emissions in the last three years. The share is up from the 51% reported by Benvenuti in his dissertation. In the region, Treviso, Vicenza, and Padova are the leading provinces (more than 70% of the regional emissions). Veneto's prominence and strong growth in issuances can be attributed to the region's major industrial development;
- the manufacturing industry still appears to be the most inclined toward minibond issuance, although at slightly lower values than in the 2013-2017 period (49% vs. 55%). The driving subsectors are metal products processing/manufacturing and machinery and equipment production;
- about 60% of firms are found to have a turnover lower than €50 million, a percentage that rises to 80% when considering firms with a turnover lower than €100 million. When these figures are compared with those found by Benvenuti in his dissertation (45% and 64%, respectively), it emerges that minibonds have been a particularly attractive funding tool for smaller firms in recent years. This growth could be traced to several factors, including, for example, macroeconomic factors, such as the lower cost of money in the 2021 and first half of 2022 period and the post-pandemic economic boom, or cultural factors, such as a greater understanding of the potential of the financial instrument and a higher degree of “financial awareness” among smaller firms. Finally, regulatory changes (listed in table 1.1 in the first chapter) may also have stimulated growth in the use of this instrument by smaller firms on the one hand, and the propensity for finance companies and investment funds to invest in this instrument (even when it is issued by smaller firms) on the other;

²⁴ Especially from the increase in the cost of energy caused by the Russian-Ukrainian conflict.

- by comparing the average of eight financial ratios results of each pre-emission year with the average of each corresponding emission year, it emerges that the issuance of minibonds does not have a great impact on the financial ratios of the year of issuance compared to the previous year, except in the proportion of long-term debt. The latter results higher, thus signaling that this instrument has enabled enterprises to lengthen the average maturity of financial debts. Furthermore, the ability to cover financial expenses on debt is worse in the year of issuance (partially due to the increase in interest rates between 2022 and 2023);
- by comparing the average financial ratios results of each pre-emission year with the average of each corresponding emission year, it emerges that the issue year 2023 had the highest shift from short-term financial debt to long-term financial debt. A reason behind it could be the increase in interest rates between 2022 and 2023. Indeed, it can be supposed that the issuance of new debt to repay existing debt, but with a longer maturity, reduced the amount of each installment to be paid, thus providing issuing firms with an opportunity to better manage their financial resources. It can also be argued that through the issuance of minibonds, issuing firms have obtained more convenient repayment terms. Moreover, there was a deterioration in the financial expense coverage ratio, represented by the EBIT/Financial expenses ratio. The latter, indeed, first improved between 2020 and 2021, due to the maintenance of interest rates at zero following the pandemic, as well as thanks to the economic recovery, and secondly, contracted sharply just between 2022 and 2023, due to the increase in interest rates;
- by comparing the average of financial ratios results in each of the three pre-emission years, it emerges that, over the past three years, there has been an increase in the average EBITDA/Turnover ratio, which could be driven by an increase in average overall profitability (caused by the post-pandemic recovery) and a progressively higher EBITDA% than that of issuing companies that managed to issue with minibonds in previous years. In particular, the latter could be caused by the reversal of macroeconomic conditions (growth in inflation and interest rates) that began in 2022. Moreover, the issuances of the past three years also show a general decrease in the initial indebtedness of issuing companies. Again, the trend could be due to different macroeconomic conditions impacting issuers. In particular, 2020 issuers likely had higher debt ratios due to the poor economic performance caused

by the pandemic, which has subsequently improved. However, the trend indicates how firms with progressively lower debt ratios were able to issue minibonds over the three years under consideration;

- by comparing the average of the financial ratios from the last three years with the average of the data between 2013-2017, analyzed by Luca Benvenuti in his final dissertation, it emerges that:
 - the average level of pre-issuance debt for issuing firms has decreased significantly. Therefore, it can be concluded that between 2013 and 2017, it was also possible for firms with higher debt levels to issue minibonds;
 - in the 2013-2017 period, issuances appear to have been made by firms with a high imbalance between short-term and long-term financial debt. Differently, it appears that in recent years, companies that have been able to issue minibonds are those with a higher share of long-term financial debt;
 - EBIT/Financial expenses ratio has increased by 30%. This shows that today those companies with a greater ability to cover interest on debt are more successful in issuing minibonds;
 - there has been a deterioration in the working capital management of issuing firms in recent years. However, it seems that this deterioration is not particularly relevant to allow the issuance of minibonds.

CHAPTER 3
WHAT MAKES A MINIBOND ISSUANCE UNSUCCESSFUL?
ANALYSIS OF A PRIVATE DEBT FUND'S INVESTMENT CRITERIA.

3.1. Introduction

In the previous chapter, the average financial conditions of Triveneto's minibond issuers in the last three years have been presented. However, many of these issues were pursued under widely varying financial conditions of individual issuing companies. In addition, some emissions have been performed even in cases where the company had rather poor financial ratios. Issues have been feasible on different terms because of the different characteristics of the various businesses, as well as the specific investment thresholds of investors.

Therefore, the third chapter aims to investigate:

- some cases of unsuccessful minibond emissions. Particularly, two cases of potential investments, but which were ultimately not completed by Veneto Sviluppo, are analyzed to understand what prevented these companies from closing the deal;
- whether the Triveneto's firms analyzed in the previous chapter would have been able to do so equally in the event that these had been subject to certain pre-screening criteria. Specifically, an evaluation dashboard is presented with which it is assessed whether or not a private debt fund, based solely on the available financial data, would have considered a potential investment in the minibonds of those companies (considering the thresholds defined).

3.2. Unsuccessful deals: analysis of some failed minibond issues

In this paragraph, two real cases of unsuccessful minibond emissions are presented and analyzed²⁵. Specifically, those cases have been kindly provided by Dr. Marco Cavasin, Veneto Sviluppo's Head of Investment²⁶, thanks to whose information and support it was possible to carry out many of the analyses in this paragraph.

²⁵ Company names will be altered, and some information will be omitted if cannot be disclosed.

²⁶ Veneto Sviluppo S.p.A. is the financial company wholly owned by the Veneto Region. It is active in underwriting equity or debt capital issued by SMEs in the Triveneto region. Mainly, it focuses on underwriting

3.2.1. Company A

3.2.1.1. Introduction

The first case concerns the attempted issuance of a 6-month minibond, with a maximum value of €1 million, by a company that will henceforth be called Company A.

Company A is a family-owned commercial company based in the Triveneto region and active in the distribution of technical equipment mainly related to the world of heavy vehicles. Specifically, it is specialized in the distribution of professional products for fastening and assembly, metal and plastic small parts, hand, electrical and pneumatic tools, hydraulic equipment, chemicals, accident-prevention clothing and equipment, storage systems and workshop fittings. The product range, at the time of the proposal, was wide and cross-sectional (over 55,000) and operated in the following areas:

- truck: historical sector of the company with highly qualified products;
- automotive: a sector with a high-quality standard, the company developed specific products for machine shops, car and motorcycle dealerships, body shops, electricians, tire shops, service and washing stations, car rental shops, and workshops installing gas and air conditioning systems;
- hydraulics: through its plants, had state-of-the-art equipment and machinery for repairing and assembling high and medium pressure hydraulic hoses and fittings;
- construction: supply of products and service to construction companies and specialists within the construction-related industry;
- wood: production of woodworking tools and resale to carpenters and interior designers;
- metal: production and resale of heterogeneous products ranging from tools to metal chemicals.

At the time of the investment proposal, it had more than 250 employees in Italy and 5 sales branches in other European countries (product commercialization was handled through both agents and employed salespeople).

Moreover, the previous year the issuing attempt it had sales revenue up 5% from the previous three years with a Value of Production 3-year CAGR of 3%. Particularly,

minibonds. Currently, its minibond fund has an endowment of €48.5 million and has invested more than €58 million between 2016 and 2024 (time span in which the cases analyzed are also located).

revenues were broken down as follows for each segment: 43.94% Truck-Agriculture, 29,53% Automotive, 26,53% Construction, Wood and Metal. As for Group-wide revenues, these increased by 11%, suggesting a better performance of the abroad branches (which accounted for 22% of total revenues in the year of the proposal) than the Italian one.

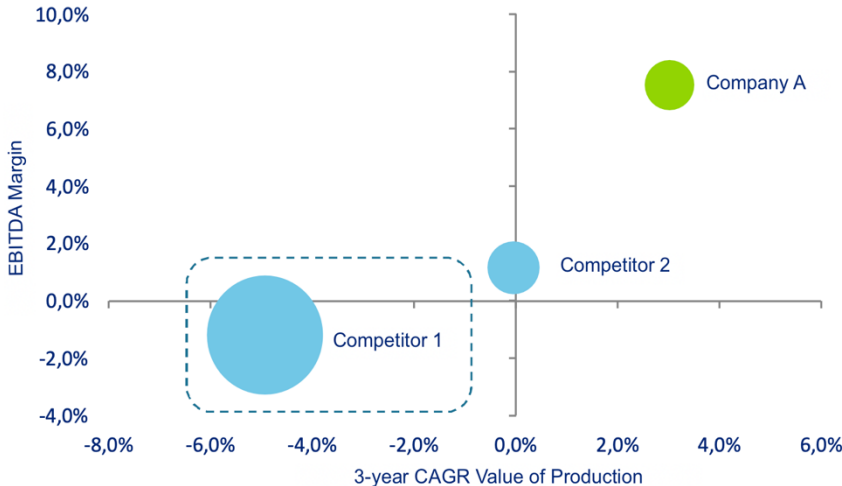
Regarding the market features, the critical success factors in the automotive and craft fastener marketing segment were defined as follows:

- logistics efficiency;
- service level;
- product range breadth;
- procurement policies.

Company A emerged as qualified and performing well in all these factors. Additionally, benefited from an established brand that was well known in the Italian market and was gaining more and more visibility at the European level as well. Furthermore, it had a wide sales network built up over the years that was a significant barrier to entry in this industry.

Within the markets served, two foreign firms (operating in Italy with two branches) emerged as main competitors, although these were much larger in size (both above €1 billion in turnover). The following figure compares the performance of company A with those of main competitors.

Figure 3.1: Comparison between the performance of company A with that of main competitors (related to Italian branches).



Source: Company A information memorandum for the minibond emission.

As the image above highlights, it appears that Company A was outperforming its two direct competitors in Italy, thus suggesting its excellent penetration and positioning in the Italian market.

In the scenario described so far, as mentioned, Company A assessed the issuance of a 6-month minibond with a maximum value of €1 million, proposing to Veneto Sviluppo to become a co-investor through the subscription of a share not exceeding 50% of the emission. The minibond was to be issued as part of an ordinary funding activity by the company to be used to support the structural development of working capital. The table below provides a full description of the main emission's features.

Table 3.1: Company A emission's features.

Maximum issuance amount	€ 1,000,000.00; issue consisting of a maximum of no. 20 Bonds with a Unit Nominal Value of € 50,000.00 each
Issue price first offering period	100%
Date first offering period	09/XX/XXXX to 28/XX/XXXX
Issue price second offering period	100% (€ 50,000) + accrued interest accrued from the Issue Date to the relevant Settlement Date
Date second offering period	From 03/XX/XXXX to 31/XX/XXXX
Redemption price at natural maturity	100%
Issue date	30/XX/XXXX
Date of accrual	30/XX/XXXX
Maturity date	31/XX/XXXX
Interest rate	4% simple on an annual basis prorated per period.
Date of payment of principal and interest	31/XX/XXXX
Guarantee	The Minibonds are not backed by a guarantee. This is without prejudice to the possibility for Professional Investors eligible to benefit from Guarantees provided by the Central Guarantee Fund (MCC), and of course in the presence of the subjective and objective requirements for the granting, with reference to the Issuer and the applicant for the Guarantee, to apply at their own care and expense also for a public guarantee, under the terms and conditions provided by the Regulations of the said Fund.
Call option	The Issuer may redeem the Minibonds in full (on an "all or nothing" basis) on the last day of each calendar month beginning on the 4th month after issuance and ending on the month immediately preceding the month in which the natural maturity of the Minibonds is fixed.
Put option	Each security holder has the right to request early redemption upon the occurrence of any of the following events: Change of control; failure to comply with commitments; bankruptcy proceedings and crisis of the Issuer; liquidation; protests, registrations and transcripts; disposal of assets; failure to comply with legal or regulatory requirements; invalidity or illegality; delisting; cross default of the Issuer; significant prejudicial event; authorizations, permits, licenses; certification of financial statements; failure of the Issuer to comply with its commitment to voluntarily audit its financial statements on a going concern basis for as long as its bond issues are outstanding.
Costs	Coupon rate: 4.00% simple on an annual basis prorated per period. Retainer fee (up-front cost): €10,400. Success fee: 0.7% on the total Issue. Admission costs at Euronext Access Milan: €2,500 and other fees and charges totaling €1,000. Rating Agency Cost: €0 (rating not present).

Source: Company A information memorandum for the minibond emission.

From the table, three important facts about the potential issue emerge: it was unsecured (neither public nor private), it was unrated, and it was intended for listing on the

Euronext Access Milan segment of the Italian stock exchange. In addition, early redemption rights emerge, both of the issuer and the security holders, at certain times or upon the occurrence of certain trigger events.

At the time of the investment proposal, Veneto Sviluppo conducted a detailed due diligence process on the possible deal with Company A, which does not only considered what stated above, but focused mainly on the analysis of the financial statements of the last three years, some of the figures that can be calculated with it, and the business plan prepared by Company A's management. Since the data from Company A cannot be disclosed, data from the results obtained from Veneto Sviluppo's analysis using AIDA Bureau Van Dijk software are presented below.

Figure 3.2: Veneto Sviluppo's analysis using AIDA Bureau Van Dijk software

Indici	Società	Gruppo		Posizionamento società		
		Periodo Solvibili	Periodo Bancarotta	Bancarotta area	Intermedia area	Solvibili area
EBITDA/Ricavi (%)	7,66	5,02	-30,73			X
EBIT/Ricavi (%)	5,35	3,15	-44,54			X
EBIT/Totale Attivo (%)	6,94	4,05	-46,12			X
EBITDA/Totale Oneri Finanziari	3,34	6,43	-5,80		X	
Ricavi/Totale Attivo	1,30	1,35	1,29			
Debito Finanziario/Ricavi (%)	24,65	14,26	52,88		X	
Debito Finanziario/EBITDA	3,23	3,85	-1,82			X
Debito Finanziario/Totale Patrimonio Netto	1,44	0,70	-1,85			
Totale Patrimonio Netto/Totale Attivo (%)	22,29	28,94	-41,59		X	
Debito Finanziario Lungo Termine/Debito Finanziario (%)	56,04	13,15	19,39			
Posizionamento generale						

X valore società
 valore medio società insolventi
 valore medio società solvibili

Source: Company A information memorandum for the minibond emission.

From the analysis conducted, it appeared that Company A had good debt solvency capabilities, confirmed by the Probability of Default (PD) calculated by the rating model that was 6,7% points, lower than the industry average (10,4%). Moreover, in the table below are calculated the indexes used in chapter 2 for the last three years and the outlook.

Table 3.2: Company A main financial indexes (personal elaboration).

Indexes	t-3	t-2	t-1	t (F)	t+1 (F)	t+2 (F)	t+3 (F)
EBITDA/Turnover (%)	6,35%	7,53%	7,53%	7,47%	7,51%	7,47%	7,75%
NFP/Equity	1,95	1,57	1,51	1,00	0,72	0,41	0,17
NFP/EBITDA	5,12	3,58	3,42	2,53	1,90	1,17	0,51
NFP/Turnover (%)	33%	27%	26%	19%	14%	9%	4%
Short-term financial debt/Total financial debt (%)	55%	60%	47%	n.a.	n.a.	n.a.	n.a.
Long-term financial debt/Total financial debt (%)	45%	40%	53%	n.a.	n.a.	n.a.	n.a.
EBIT/Financial expenses	1,92	1,96	2,24	n.a.	n.a.	n.a.	n.a.
NWC/Turnover (%)	32%	21%	21%	16%	15%	13%	12%

Source: Company A information memorandum for the minibond emission.

From the figures presented so far, the Company A minibond investment operation would seem to rely on very robust economic and financial conditions. Indeed, some very positive trends emerge from the table above over the past three years:

- increasing marginality;
- capital structure that relies less on financial debt;
- improved conditions for sustainability of financial debts and debt service;
- debt consolidation with increase in long-term portion;
- improvement in working capital management.

3.2.1.2. Veneto Sviluppo's assessment

Downstream the due diligence process, carried out by Friulia Veneto Sviluppo (FVS) SGR S.p.A (a subsidiary of Veneto Sviluppo), the Veneto Sviluppo's Investment Area, which is entrusted with the technical judgment on the analysis using a predefined scoring model, had assigned to the proposal the "A3" category of the scoring model, i.e., the investment was defined as "vulnerable". Despite the term, Veneto Sviluppo's Board of Directors had previously determined that minibond transactions that fall into risk class "A3" were to be considered "eligible without additional guarantees/counter-guarantees".

However, the investment proposal, once it landed in Veneto Sviluppo's Minibond Fund Technical Committee, a body that reviews the transaction, assesses risks and opportunities, evaluates any conditions to be placed prior to closing and provides a final advisory opinion that it sends to the Board of Directors, had given an unfavorable opinion, defining the Company A minibond investment transaction as unsuitable for the purposes pursued by the company, namely the structural development of operating working capital.

The determinants of judgment have been shared by Dr. Marco Cavasin and they are presented below:

- firstly, Committee members considered the amount of unused credit lines and the level of financial debt to be significant. In addition, the Committee members considered that the minibond transaction was more costly than using the banking channel for credit facilities of a similar duration as the transaction under review (6 months), so the instrument would not be a substantial aid in the pursuit of the issuer's stated purposes;

- secondly, Committee members pointed out a substantial imbalance in the issuer's capital structure, which would have needed capitalization by shareholders/third party investors also in order to make debt service more sustainable;
- finally, the Committee members also noted the need for the company to review the company's organizational structure, stressing first and foremost the absence of a finance manager with adequate knowledge and experience commensurate with the issuer's business reality, taking into account that the Finance, Administration and Control Area represents a strategic structure for the company that requires constant supervision²⁷.

Therefore, the investment proposal, pursued by FVS and then not recommended by the Minibond Fund Committee, was finally blocked by the Veneto Sviluppo Board of Directors, which aligned with the Committee's position.

By deepening this judgment through the study of the financial analysis conducted and represented in the transaction's information memorandum, the reasons for this negative opinion emerge in more detail. Specifically, they can be found in some information that unfortunately do not emerge from a simple financial statement analysis. They involve the identification of debts not included in the balance sheet and the analysis of current total debt exposures obtained from the access to the "Centrale dei Rischi". Particularly, two additional information emerged that inclined Veneto Sviluppo's decision toward a negative outcome:

- the company had signed a multi-million-euro lease for the construction of the new logistics site adjacent to the company headquarters, an investment considered strategic for Company A because, in addition to enabling better management of operations, it allowed the handling of twice the volume of goods than at the time, with an important spillover effect on potential turnover for the following years. However, lease liabilities were not previously calculated within the Net Financial Position. In addition, the value of some derivative financial instruments held by the enterprise had to be added. Plugging all of this into the Net Financial Position and EBITDA, thus, showed that the firm had an NFP/EBITDA ratio of more than 5, a value considered particularly risky for an unsecured bond instrument. Furthermore, the increased Net Financial Position had an impact also on the capital

²⁷ Indeed, Company A's management was composed by the CEO, the General Manager, the Director of Legal Affairs and Personnel, the Purchasing/Logistics Manager, the IT Manager, and the Administration Manager.

structure. Indeed, the recalculated NFP/Equity ratio grew up to 3.1, higher than the 2.5 which is considered, again, as the limit for an unsecured minibond;

- through analysis of the “Centrale dei Rischi” database, it was found that Company A had several credit lines granted of which, in April of the year of the investment proposal, it had used only 74%. The table below represents the situation of the lines granted by banks and used by Company A.

Table 3.3: Lines of credits used by Company A.

Category	% Used
Maturing risks > 1 year	100,00%
Self-liquidating risks < 1 year	51,50%
Maturing risks < 1 year	78,11%
Revocable risks	15,54%
Signature loans	45,15%
Total	74,42%

Source: Company A information memorandum for the minibond emission.

Moreover, by looking at the monthly change over the previous 12 months in the table below, it can be seen that the percentage of used credit lines remained fairly constant while the amount of credit lines granted in May increased significantly, a factor that made the percentage of used credit lines even lower.

Table 3.4: Lines of credits granted and used by Company A. Monthly change.

Period	% MoM var - granted	% MoM var - used	% used
May-t	15%	-2%	63%
Apr-t	-2%	-2%	74%
Mar-t	-2%	5%	74%
Feb-t	2%	4%	70%
Jan-t	-1%	3%	69%
Dec-t-1	-1%	-3%	66%
Nov-t-1	0%	1%	67%
Oct-t-1	-1%	-5%	67%
Sep-t-1	1%	2%	69%
Aug-t-1	2%	-4%	69%
Jul-t-1	4%	0%	73%
Jun-t-1	n.d.	n.d.	76%

Source: Company A information memorandum for the minibond emission.

Hence, these two main factors, jointly with the personnel considerations made by the Committee, have stopped the investment by Veneto Sviluppo in the €1 million minibond that Company A was planning to issue.

3.2.1.3. Final considerations

This case, therefore, highlights two very significant aspects:

- a company that intends to finance itself through the issuance of minibonds must necessarily assess the consistency of the instrument with its needs and debt situation. In fact, Company A still had a lot of financial resources available in the credit lines granted by the banking system, resources that far exceeded the amount that the company aimed to raise by means of the issue. These resources, moreover, were available at a much lower cost than those to be incurred through the minibond issue. Moreover, the total amount of debt went far beyond the limits that an investor would be willing to bear for such an investment. Thus, the eventual issuance would have further worsened the debt situation, especially since it was not placed in a context of strategic development (e.g., a long-term issuance to finance an acquisition or internal growth), but was intended to finance working capital, an operation for which bank lines of credit are sometimes the more appropriate instrument than short-term bond issuance (especially when they are cheaper and already granted);
- when a company enters into the use of more complex financial instruments, such as issuing bonds, it is crucial to have a team of people with financial expertise within its own structure. On top of that, this demonstrates to the potential investor that the management of financial resources is something that the company cares about and considers strategic to its success.

These elements were the cause of Company A's failure in the minibond emission.

3.2.1.4. Further considerations

A legitimate question might be to ask why Company A intended to pursue this emission despite having equally available financial resources for working capital management.

The answer comes directly from the words of the CEO, who time later (and having equally succeeded in issuing the minibond thanks to the support of another investor), said that the goal was to internally test the entire issuance process to make it suitable for structured recourse over time, so that such instruments can gradually be used on a permanent basis. Moreover, he had not excluded larger and long-term solutions in the future.

This case, therefore, also demonstrates how minibonds can be a useful tool for testing greater recourse to the capital market, both in case of debt issuance, as here, and in case of future equity issuance (moreover, it cannot be ruled out that minibond issuance can be preliminary for a company in approaching a private equity fund).

3.2.2. Company B

3.2.2.1. Introduction

The second case concerns the issuance of a 6-year minibond, with a maximum value of €7 million, by a company that will henceforth be called Company B.

Company B is a manufacturing company active in the production and commercialization of fresh plain and filled pasta, gluten-free pasta, deli and fresh ready meals, vegetable drinks, ravioli and gluten-free products. The company was founded many years ago as a small local store in the Triveneto region, where pasta was handmade using traditional methods. Over the years the business has experienced a remarkable growth, but at a certain stage it faced a particularly critical period. To lift it up, a private equity fund specialized in the food & beverage industry stepped in and bought 100% of company shares. Then, thanks to the “buy and build” strategy of the fund, the company at that time of the proposal was the parent company of a Group of seven firms operating in different segments of the food industry. Particularly, the acquisitions had been made in the following industries:

- hard semolina pasta;
- traditional gourmet and pastry ready meals;
- fish gastronomy products;
- dumpling productions;
- sales of soft drinks;
- production of fresh pasta.

These acquisitions were also possible thanks to the many distinctive characteristics of the parent company including its depth of product range, the leadership in the production of gluten-free fresh pasta, a dedicated and certified gluten-free production plant, high production capacity and flexibility, strong internationalization, and an advanced R&D department.

Despite the acquisitions completed over the years, then, the parent company was the main source of revenue for the Group (61% in the year before the issue). Specifically, the table below shows the main details of the parent company's revenue composition (mainly realized through the GDO channel).

Table 3.5: Parent Company's revenues composition.

	Category	% share
By product	Brands (ITA)	10%
	Private label (ITA)	35%
	Brands (no-ITA)	2%
	Private label (no-ITA)	53%
By family	Traditional filled	67%
	Traditional plain	24%
	Gluten-free	7%
	Commercialized	2%

Source: Company B information memorandum for the minibond emission.

Regarding the market in which Company B Group operated, at that time, the entire packaged food industry was undergoing a significant transformation in response to new consumer buying behaviors and patterns:

- evolving consumer lifestyles, which required flexible/time-saving solutions and a global range of recipes and flavors;
- premiumization needs, which required new high-quality ingredients and gourmet product lines;
- increasing ethical and health consciousness, which required high standards of safety, transparency and sustainability;
- increasing consumer digitization, which required value propositions and innovative service models.

Regarding the market size, at the country level, the largest market for refrigerated ready meals was the US (3.6Bn, CAGR 6.5%), followed by the UK (2.3Bn, CAGR 6.1%), France (2.3Bn, CAGR 2.9%), Italy and Spain (0.3Bn, CAGR 3.5% and 11.1%). Moreover, the competitive landscape was fragmented, with strong positioning of private labels in the EU (44% market share).

Furthermore, the largest fresh pasta market was Italy (0.8 Bn, CAGR 1.0%), followed by France, Germany and the US (with 0.4 Bn each, with CAGRs of 4.8%, 5.1% and 3.6% respectively). Even in this case, the competitive landscape for pasta in general was relatively fragmented, with strong positioning of private labels (33% market share in the EU and 23% in the US).

Delving deeper into the Italian market, the fresh pasta market in Italy was worth €765 million for over 130,000 tons sold (a market that was growing in value (+1.3%) but

declining in volume (-1.7%). Specifically, the table below shows the changes in value and volume sales in each market segment.

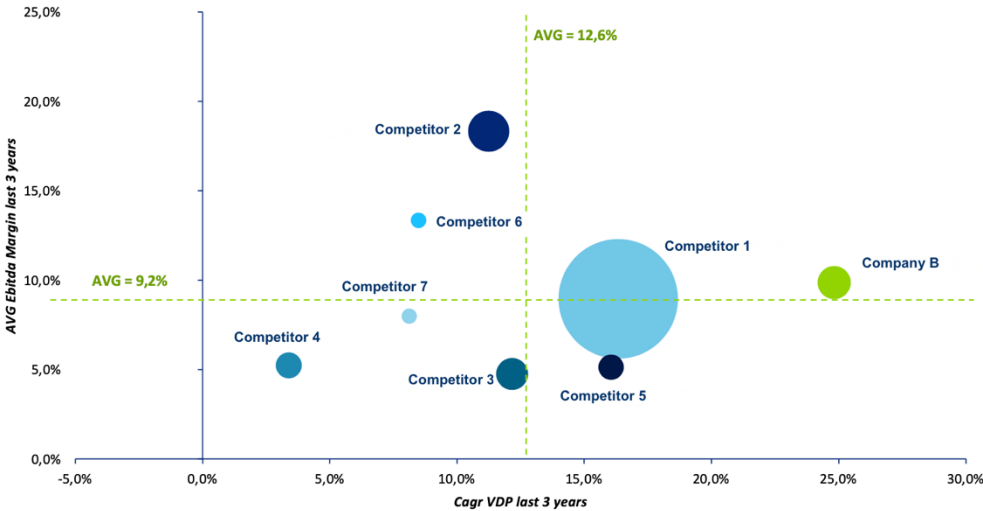
Table 3.6: Changes in value and volume sales in each market segment.

Product	% change of sales in value	% share of sales in value	% change of sales' share in value	% change of sales in volume	% share of sales in volume	% change of sales' share in volume
fresh packaged pasta	1,3	100,0	0,0	-1,7	100,0	0,0
- filled	2,7	63,6	0,9	0,7	44,0	1,1
- egg pasta	-0,4	5,9	-0,1	-4,7	7,2	-0,2
- semolina	-1,8	9,4	-0,3	-6,4	18,8	-0,9
- lasagna	-5,1	6,5	-0,4	-7,0	6,7	-0,4
- gnocchi	1,1	14,6	0,0	0,2	23,4	0,5

Source: Company B information memorandum for the minibond emission.

Then, comparing the performance of Company B with that of its main competitors, it was found that Company B, within the pool of Italian companies operating in the fresh pasta industry, ranked above average in terms of both marginality and growth in value of production over the past three years, thus positioning itself as a best performer in the segment thanks to the aforementioned M&A process undertaken by the Group's management during the years prior to the minibond issue. The following figure compares the performance of Company B with those of main competitors.

Figure 3.3. Comparison between the performance of Company B with that of main competitors.



Source: Company B information memorandum for the minibond emission.

In the scenario described so far, as mentioned, Company B decided to issue a 6-year minibond with a maximum value of €7 million, proposing to Veneto Sviluppo to become a co-investor through the subscription of a share not exceeding 50% of the emission. The

financial resources from the minibond emission were intended to support the investment program envisaged in the Group's business plan, mainly represented by:

- the finalization of the new production plant of the subsidiary company active in the production of traditional gourmet ready meals and pastry;
- support for the investment program of the parent company including the construction of a new production plant in the Triveneto region.

The table below provides a full description of the main emission's features.

Table 3.7: Company B emission's features.

Size	100.000,00																		
Currency	Euro																		
Overall Amount	Up to a maximum of €7,000,000.00																		
Form	In bearer and in dematerialized form																		
Listing	Not provided																		
Centralization	Euronext Securities Milan																		
Status	Senior unsecured																		
Guarantee	Not present																		
Use of Proceeds	Proceeds from the Issue will be used by the Issuer to support the Group's investment program																		
Issue Date	Issue of the Bond is likely to take place by 30/XX/XXXX																		
Duration	6 years from the Issue Date																		
Repayment Profile	Amortizing at a constant principal amount, with a maximum grace period of 18 months																		
Coupon Periodicity	Semi-annually																		
Interest Rate	6-month Euribor																		
Spread	<p>Spread 3.25% per annum (the "Initial Spread") which may possibly vary as follows:</p> <ul style="list-style-type: none"> • if NFP/EBITDA is greater than 3.5 the initial spread increases by 0.15%; • if NFP/EBITDA is lower than 2.5, the initial spread decreases by 0.15%. 																		
Date of calculation	Date on which the Financial Parameters will be calculated and verified meaning December 31 of each year, starting from the Issue Date																		
Financial Parameters	<p>The Financial Parameters and the definitions of NFP, Equity and EBITDA will be substantially aligned with the provisions of the minibond issued the previous year, namely:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Covenant</th> <th>t+1</th> <th>t+2</th> <th>t+3</th> <th>t+4</th> <th>t+n</th> </tr> </thead> <tbody> <tr> <td>NFP/Ebitda</td> <td><4,2x</td> <td><3,5x</td> <td><3,0x</td> <td><3,0x</td> <td><3,0x</td> </tr> <tr> <td>NFP/Equity</td> <td><1,5x</td> <td><1,5x</td> <td><1,5x</td> <td><1,5x</td> <td><1,5x</td> </tr> </tbody> </table>	Covenant	t+1	t+2	t+3	t+4	t+n	NFP/Ebitda	<4,2x	<3,5x	<3,0x	<3,0x	<3,0x	NFP/Equity	<1,5x	<1,5x	<1,5x	<1,5x	<1,5x
Covenant	t+1	t+2	t+3	t+4	t+n														
NFP/Ebitda	<4,2x	<3,5x	<3,0x	<3,0x	<3,0x														
NFP/Equity	<1,5x	<1,5x	<1,5x	<1,5x	<1,5x														

	<p>It is agreed that the Shareholder Loans will still be excluded from the definition of NFP and included within the definition of Equity as they are subordinated to both the minibond under consideration and the previous minibond.</p> <p>It is agreed that the Financial Parameters will be calculated with reference to the Issuer's Statutory Financial Statements or, if the Issuer prepares consolidated financial statements, the Consolidated Financial Statements of the Group.</p>
<p>Principal Commitments</p>	<p>Taking into account the characteristics of this Bond, the Issuer's Principal Commitments will be aligned with the provisions of the previous minibond, including but not limited to:</p> <ul style="list-style-type: none"> a) pari passu; b) change of business; c) negative pledge; d) compliance with Financial Parameters; e) delivery of the following documents: the Consolidated Financial Statements of the Group or, if not present, the Annual Financial Statements of the parent company and those of the relevant subsidiaries complete with the management report of the administrative body and certified by the Statutory Auditor; Delivery of the Statement on Financial Parameters signed by a legal representative of the Issuer certifying compliance with the Financial Parameters; f) information regarding any litigation, arbitration, administrative, tax and/or any other proceedings in progress, threatened in writing or pending against it, and which could, if it ends unfavorably, result in a Significant Adverse Event; g) limit on acquisitions and extraordinary transactions (a clause that will be aligned with respect to the provisions of the previous minibond's regulations); h) limit on the distribution of dividends and capital reserves (which will be aligned with respect to what is provided in the previous minibond's regulations).
<p>Early Redemption in favor of the Issuer</p>	<p>The Issuer may proceed to redeem the Bond in whole or in part at a par value equal to:</p> <ul style="list-style-type: none"> a) with respect to the Payment Dates falling between the Payment Date falling 30 months from the Issue Date and the Payment Date falling 42 months from the Issue Date, 101% of the outstanding par value of the Bonds; b) with respect to the Payment Dates falling between the Payment Date falling 48 months from the Issue Date and the Payment Date falling 60

	<p>months from the Issue Date, 100.50% of the outstanding par value of the securities;</p> <p>c) with respect to the Payment Dates falling between the Payment Date falling 66 months from the Issue Date and the Payment Date falling 84 months from the Issue Date, 100% of the outstanding par value of the securities.</p>
Mandatory Early Redemption	The Issuer will be required to make mandatory early redemption of the Loan upon the occurrence of a Relevant Event.
Relevant Events	<p>Taking into account the characteristics of this Bond, Relevant Events will be aligned with respect to the provisions of the previous minibond, including but not limited to:</p> <ul style="list-style-type: none"> a) failure to pay; b) change of control (the reference will be on the Issuer's ultimate shareholder or other corporate vehicles that refer to the same shareholders of Issuer's ultimate shareholder); c) cross default (with specific materiality thresholds); d) business cessation; e) bankruptcy proceedings and crisis; f) failure to meet one of the Financial Parameters (with possibility of equity cure); g) failure to comply with the Commitments; h) enforcement proceedings; i) insolvency; j) judgments and other measures; k) significant prejudicial event; l) failure to certify accounting records.

Source: Company B information memorandum for the minibond emission.

At the time of the investment proposal, Veneto Sviluppo conducted a detailed due diligence process on the possible deal with Company B Group, which does not only considered what stated so far, but focused mainly on the analysis of the financial statements of the last four years and the first half of the year of the emission, the 5-year business plan prepared by Company B's management, the analysis of data from the Bank of Italy's "Centrale dei Rischi", as well as the analysis of creditworthiness. Since the data from Company B cannot be disclosed, in the table below are summarized the main financial ratios (the same used in chapter 2) in order to better understand the Company B's economic-financial dynamics in recent years as well as the projected trends.

Table 3.8: Company B group's main financial indexes (personal elaboration).

Indexes	t-4	t-3	t-2	t-1	t (B)	t+1 (F)	t+2 (F)	t+3 (F)	t+4(F)	t+5(F)
EBITDA/Turnover (%)	10%	11%	11%	7%	11%	14%	17%	19%	20%	22%
NFP/Equity	n.a.	n.a.	n.a.	0,91	1,70	1,22	0,53	0,05	n.a.	n.a.
NFP/Equity adj shareholders loans	n.a.	0,30	0,30	0,27	0,60	0,54	0,28	0,03	n.a.	n.a.
NFP/EBITDA	n.a.	0,90	0,90	1,81	2,60	1,55	0,73	0,07	n.a.	n.a.
NFP/Turnover (%)	n.a.	n.a.	n.a.	12%	27%	22%	12%	1%	n.a.	n.a.
Short-term financial debt/Total financial debt (%)	n.a.	n.a.	n.a.	0%	0%	0%	0%	0%	0%	0%
Long-term financial debt/Total financial debt (%)	n.a.	n.a.	n.a.	100%	100%	100%	100%	100%	100%	100%
EBIT/Financial expenses	5,74	8,44	7,09	2,61	3,87	4,63	8,21	15,52	27,96	52,98
NWC/Turnover (%)	n.a.	n.a.	n.a.	n.a.	1%	3%	5%	7%	7%	8%
DSCR	n.a.	n.a.	n.a.	n.a.	n.a.	1,15	1,16	1,67	2,61	3,93

Source: Company B information memorandum for the minibond emission.

From the financial ratios presented above, an absolutely sound economic and financial situation emerges, not only with regard to historical data, but also to prospective values. Particularly, it seems that Company B had a solid marginality as well as an overall indebtedness sustainable and under control. Regarding the prospective values, these may have been too optimistic when looking at the trend that seemed to start between t-2 and t-1 about marginality, the NFP/EBITDA and EBIT/Financial expenses ratios. However, it is necessary to specify that Company B in t-1 issued another minibond, therefore worsening some of the financial indicators examined.

To complete the analysis, it is worth to provide the results obtained from the archive of the "Centrali dei Rischi" on the overall debt exposure of the parent company and the subsidiary company active in the production of traditional gourmet ready meals and pastry (as mentioned, recipient of part of the amount to be raised through the minibond issue). Table 3.9 below summarizes the main information.

Table 3.9: Lines of credits used by Company B.

Entity	Category	% used
Parent company	Self-liquidating risks	71,48%
	Maturing risks	97,12%
	Revocable risks	4,22%
Subsidiary 1	Self-liquidating risks	80,78%
	Maturing risks	77,79%
	Revocable risks	0,00%

Source: Company B information memorandum for the minibond emission.

The analysis of the information available in the “Centrale dei Rischi” showed that 91,24% of the parent company's loans granted (total of 22 entrusting intermediaries) was used and there were no non-performing loans. However, an overdraft of a few hundred euros on a leasing transaction was noted for the first time in the past 12 months. Taking into account that the latter was only finalized in the summer of the emission’s year, it was believed that this report, also in view of the amount, was attributable to an information/accounting mismatch and did not represent a sign of difficulty from the issuing company. In addition, from the historical analysis of credit facilities, the issuing parent company showed a regular performance, with high utilization rates of self-liquidating lines due to the business conducted and the numerous relationships with large-scale retailers (GDO). However, the customer portfolio was good, with low percentages of unpaid receivables.

Concerning the analysis of the subsidiary, the results from the “Centrale dei Rischi” showed that 74,95% of the operating credit facilities were used, and there were no non-performing loans or overdrafts (there were a total of 7 entrusting intermediaries). The historical analysis of subsidiary’s credit facilities, over the past 12 months recorded an absolutely regular trend with the banking system that, through the opening of a new relationship, had expanded the credit facilities granted.

3.2.2.2. Veneto Sviluppo’s assessment

According to what has been presented so far, in terms of market, competition, financial structure, marginality, and creditworthiness, it seems that Company B had all the prerequisites to enable Veneto Sviluppo to underwrite the minibonds and provide the necessary resources for the development of Company B.

Below is presented the overall assessment by Veneto Sviluppo.

Table 3.10: Veneto Sviluppo’s overall assessment.

Category	Assessment	Rating
MCC merit band	The simulation carried out using the fund's scoring model returns a default probability of 1.02%, which places Company B in “band 2” out of the 5 bands provided by the fund itself. The facility, in view of the reconciliation table approved by the Board of Directors of Veneto Sviluppo assigns to the variable “Medio Credito Centrale merit band” of its scoring model the maximum score of “1.”	(0 - 1): 1
Company	Strengths: <ul style="list-style-type: none"> widely diversified Group as pertaining to product range; wide geographical presence with multiple sales channels; 	(1 - 4): 2

	<ul style="list-style-type: none"> • the main company in the Group, holds a well-known brand well known by the market, with a long operational presence; • presence of an institutional investor within the corporate structure of the issuer; • sector that does not exhibit cyclical characteristics. <p>Weaknesses:</p> <ul style="list-style-type: none"> • declining marginality of the sector, also affecting the Group; • sector exhibiting difficulties in reversing increases in selling price with several leading companies in crisis, but with possible opportunities to acquire their market shares; • quite substantial debt structure, consequent to a high push on capacity increase and M&A, with positive impacts not yet fully reflected in current numbers; • strong dependence on a single customer. 	
Management	<p>The Group is controlled by a private equity fund that is specialized in acquisitions of companies with a strong focus on Made in Italy, with particular regard to the food industry, a segment in which numerous acquisitions have already been materialized by the fund's management. Portfolio companies are also led by professionals who have an important background in companies and multinationals in the food world, who have been joined in some cases by external consultants specialized in specific business areas.</p> <p>The analysis carried out on the "World Check" database did not reveal any findings.</p> <p>It is also noted that according to the verification carried out, in compliance with the provisions of the "Regulation for the management of relations with Associated Persons and conflict of interest", there are no situations, even potential ones, of conflict of interest under current regulations regarding transactions with Associated Persons involving the management and ownership of Company B.</p>	(1 - 4): 4
Rating	Absent	(1 - 10): 0
Liquidability of the investment	<p>The purpose of this variable is to assess the degree of liquidability of the investment in the presence of factors such as the possible listing on the regulated market in the presence of actual transactions, the presence of a put option (early redemption of the debt security) that can be exercised in the presence of specific predetermined events (e.g., economic/equity covenants not complied with), as well as the amount in absolute value of each individual issue.</p> <p>In the specific case, the Company B minibond has a duration of 6 years and a maximum issue amount of €7,000,000.00. The minibond, for which no listing is planned, has a put option and a call option for early redemption of the debt security that can be exercised in the presence of specific events.</p>	(1 - 2): 2
Degree of risk coverage	<p>The objective of this variable is to assess whether each individual debt security investment transaction is to be considered "secured" or "unsecured" based on the possible presence of economic/equity covenants that the issuer must comply with for the entire life of the security. Also influencing the assessment of this variable is the possible presence of clauses that limit the exit of monetary resources from the issuer following the occurrence of extraordinary events such as to be deemed capable of increasing the probability of repayment at maturity of the security.</p> <p>In the specific case, the Company B minibond, in addition to providing for the usual "relevant events" upon the occurrence of which (even one of them) the put option can be exercised by the security holder (such as: change of control, disposal of assets,</p>	(1 - 4): 3

	insolvency, bankruptcy proceedings and liquidation of the issuer, cross default of the issuer and subsidiaries, significant prejudicial events, adverse judgment or declaration of inability to express an opinion by the auditing firm), it is assisted by specific economic/equity covenants, while there are no guarantees to cover the amount underwritten by Veneto Sviluppato.	
Financial adequacy of the issuer to the transaction	<p>This variable aims to assess the financial adequacy of the issuer in both quantitative and qualitative terms with respect to the characteristics of the debt security issued. Specifically, for the aspect:</p> <ul style="list-style-type: none"> quantitative: the ratio between the amount of the investment in the debt security (outstanding of the issue) and the equity of the issuer is assessed (value of the investment/outstanding of the issue < 25% = excellent; > 25% and < 50% = good; > 50% and < 75% = sufficient; > 75% = insufficient, if the qualitative aspect described below is not met); qualitative: the correlation between the duration of the security issued by the issuer and the type of asset use of financial resources (current assets or fixed assets) is assessed. <p>In the specific case, the ratio between the maximum outstanding of the issue and Company B's shareholders' equity (excluding shareholders' loans within it) recorded in the two-year period t-2 - t-1 averaged 112,93%, a value falling within the "insufficient" rating class. On the other hand, the duration of the minibond under consideration appears to be "adequate" for the type of equity use of the resources derived from the bond, being aimed at financing the issuer's dimensional growth in the long term.</p>	(1 - 4): 2
Level of knowledge of the business area	<p>The purpose of this variable is to make an in-depth assessment of the rationale provided by management and ownership regarding the adequacy of the debt security issued by the issuer with respect to the investment needs pertaining to the specific business areas in which it operates, especially in terms of the time consistency and financial coverage between the flows generated by corporate investments and the flows absorbed at maturity by the debt security. It is highlighted that the Group's shareholder base is represented by a fund specializing in the food world with extensive knowledge of the sector, which also presents significant investments in segments other than the following, with an active and consolidated experience in the creation of platforms created as a result of M&A processes. It is also highlighted that the Group is led by professionals with significant experience in the sector.</p>	(1 - 4): 4
Present competitiveness in the industry	<p>The sector presents a competitive scenario with a player arena represented by large players diversified by product but leaders in the reference segment as well as small players specializing in niche or local products.</p> <p>Within the competitive arena there is significant price tension due to the high competition and scarcity of bargaining power of producers, who, with particular regard to Company B customers, are represented primarily by players pertaining to large-scale organized distribution, with particular regard to the low-end and discount segment in which margins are rather low.</p>	(1 - 4): 2
Market growth prospects	<p>The packaged food market is undergoing a significant transformation in response to new consumer buying behaviors and patterns, resulting in good growth prospects for operators able to integrate these trends within their offerings. Of particular note is the evolution of consumer lifestyles, which demand flexible/time-saving solutions and a global range of recipes and flavors, as well as</p>	(1 - 4): 3

	premiumization needs, which call for new high-quality ingredients and gourmet product lines. There is also evidence of increased consumer attention to the impact of products on their health and the sustainability of the products consumed, as well as an increasing digitization of consumers, requiring value propositions and innovative service models.	
Profitability	<p>As a result of commercial negotiation between the issuing company and the arranger, the transaction under consideration provides for an interest rate given by the sum of two components:</p> <ul style="list-style-type: none"> • 6-month Euribor, conventionally considered to be zero in case of negative values; • Spread equal to 3.25%. <p>[...] All this being said, the variable “profitability” in the scoring model is given a rating of “excellent.”</p>	(1 – 4): 3
Financial balance	<p>The objective of this variable is to assess compliance with the financial balance requirement in terms of coverage between cash flows generated by operations and debt service cash flows. In the case of minibond issues characterized by short duration, the indicator to be evaluated is the ratio of EBIT (Earning before Interest and Taxes) to Financial Expenses. In the case of minibond issues with medium/long duration, the indicator that will be evaluated is the DSCR (Debt-Service Coverage Ratio).</p> <p>In this specific case, the DSCR, calculated with reference to the years covered by the issuer's consolidated business plan, has an average value of 2.11 and a minimum value of 1.15. However given some assumptions of the plan considered difficult to achieve a sensitivity analysis was carried out on the management case of the business plan; this analysis resulted in an assessment of the Group's financial balance that is more conservative and therefore falls into the “good” category.</p>	(1 – 4): 3

Source: Company B information memorandum for the minibond emission.

Downstream the due diligence process, carried out by Friulia Veneto Sviluppo (FVS) SGR S.p.A, the Veneto Sviluppo's Investment Area had assigned to the proposal the “A3” category of the scoring model, i.e., the investment was defined as “vulnerable”. As stated for Company A, despite the term, Veneto Sviluppo's Board of Directors had previously determined that minibond transactions that fall into risk class “A3” were to be considered “eligible without additional guarantees/counter-guarantees”.

Therefore, again, the investment had been positively evaluated. Furthermore, after having also received a favorable opinion from the fund committee, the investment proposal was at such an advanced stage that Veneto Sviluppo had also identified the co-investors (since it would only subscribe to a maximum of 50% of the maximum amount of the issue) and the placement was almost towards final execution.

However, in the end, the investment proposal ran aground in the Board of Directors because it assessed that, since the ownership axis of the private equity fund that controlled Company B was indirectly attributable to entities resident in countries with

privileged tax systems or characterized by a poor exchange of information with national authorities, the investment was, as a matter of complete caution, to be blocked. Indeed, Veneto Sviluppo, being entirely controlled by the Veneto Region, a public entity, could not assume the reputational risk arising from that investment²⁸.

3.2.2.3. Final considerations

The case presented so far proves how even a potentially executable minibond issue could equally encounter obstacles unrelated to the economic and financial performance of the issuing company or the market in which it operates. This is the case with Company B and the presence of a public institutional investor, which has higher reputational, and transparency needs than a private debt fund whose capital is not subscribed by a public entity. Indeed, the investment was subsequently completed by Company B through the underwriting of the minibonds by another non-public institutional investor.

3.3. Investors point of view: analysis of a private debt fund's investment terms

In the previous paragraphs two very different cases of unsuccessful minibond emissions have been deepened: the first one failed due to reasons related to Company A financials, while the second one failed because of reputational risk safeguard concerns. The latter then, assumes marginal relevance from the point of view of an investor's investment conditions, since, as it turned out, Company B had all the technical requirements to get the minibond underwritten by Veneto Sviluppo. Instead, what is of greater interest, and which is partly highlighted by the case of Company A, is to investigate what are the economic-financial determinants that allow a company if not to be successful in issuing the bond, which was seen to be determined not only by economic-financial factors, at least to be able to see its investment proposal examined and deepened by the potential investor.

Therefore, in the remaining paragraphs some of the most relevant investment terms of a private debt investor are analyzed. Moreover, it is investigated whether the Triveneto's firms analyzed in the previous chapter would have been able to do so equally

²⁸ A risk completely unrelated to the investment itself, but linked to the events and autonomous decisions that the shareholders of the private equity fund could have taken in the course of their operational activity with reference to Company B.

in the event that these had been subject to a pre-screening with the investment criteria defined. Specifically, an evaluation dashboard is presented with which it is assessed whether or not a private debt investor, based solely on the available financial data, would have considered a potential investment in the minibonds of those companies (considering the thresholds defined).

3.3.1. Pre-screening dashboard

The following table shows the five main financial ratios and their investment thresholds commonly established by a private debt investor to define whether a potential investment is to be considered, and thus explored through more in-depth due diligence, or to be discarded out of hand. They refer not only to pre-issue years, but also to forecast years in the business plan.

Table 3.11: The most relevant investment threshold of a private debt investor.

Index	Threshold
NFP/EBITDA	=< 4,0
NFP/Equity	=< 2,5
EBITDA/Turnover (%)	>= 5,0%
NFP/Turnover (%)	=< 100,0%
Debt Service Coverage Ratio (DSCR) ²⁹	>= 1

From the table, therefore, it can be seen that the factors that are analyzed in the first instance refer to debt sustainability, capital structure and marginality. However, when a private debt fund needs to more carefully assess the feasibility of a certain investment, it also complements the outcome of the initial screening done with the ratios highlighted above with an in-depth analysis of the following variables as well:

- indicators of NWC dynamics, namely DSO, DPO, and DIO³⁰. Both with respect to the last approved year and to the business plan, they are variables that are closely

²⁹ Calculated as follows: FCFO (Free Cash Flow from Operations) / Debt Service Cash Flow (principal + interest on total financial debt). The DSCR is a key figure in the prospective analysis of a minibond investment because it gives the investor assurance with respect to the issuer’s credit risk. Specifically, the ratio must be greater than or equal to 1 in all forecast years. In addition, in case of a capex investment through the minibond, the amount must be brought up to FCFO to avoid double-counting of the sum.

³⁰ DPO (Days Payable Outstanding) is the average number of days that a company takes to pay its bills and invoices to its trade creditors. DSO (Days Sales Outstanding) is the average number of days that it takes a company to collect payment for a sale. DIO (Days Inventory Outstanding) is the average number of days that a company holds its inventory before selling it.

watched because an unmotivated change in them can be symptomatic of improper financing situations (e.g., if DSO explodes, it means that the company is financing with debt to suppliers and not with banking or alternative finance instruments);

- incidence of NWC on turnover and total assets. Notably, these two variables are highly dependent on the industry in which the firm operates. In this case, the goal is to see if they are inconsistent with the industry;
- NFP composition. Specifically, the investor verifies that short-term assets are financed mostly with short-term debt and that long-term assets are financed mostly with long-term debt. In this case, the objective is to verify that there is no imbalance in the NFP once the minibond is issued.

As stated, the companies analyzed in chapter 2 have been prescreened through the thresholds above with the aim to investigate whether those firms would have been equally able to issue the minibonds and if so why. To do this, an Excel dashboard was created whereby the results of the above highlighted financial ratios of the companies in the year prior to the issue were compared with the defined thresholds³¹. Below are some screenshots of the dashboard built.

Figure 3.4: The 4 scenarios of the pre-screening dashboard (personal elaboration).

Company name	Masi Agricola SpA	Indexes	Benchmark	Pre-emission year (2020)	Assessment	Note
Emission year	2021	NFP/EBITDA	4,0	2,1	Ok	
ID Financial Statements	6	NFP/Equity	2,5	0,1	Ok	
Headquarter	Veneto, Verona	EBITDA/Turnover (%)	5,0	9,4	Ok	
		NFP/Turnover (%)	100	19,5	Ok	
Final Assessment	Approvable	Comment	The potential investment would have passed the initial screening by a private debt fund			

Company name	Fashion Box SpA	Indexes	Benchmark	Pre-emission year (2021)	Assessment	Note
Emission year	2022	NFP/EBITDA	4,0	4,8	Partially Not Ok	
ID Financial Statements	70	NFP/Equity	2,5	1,0	Ok	
Headquarter	Veneto, Treviso	EBITDA/Turnover (%)	5,0	6,7	Ok	
		NFP/Turnover (%)	100	32,2	Ok	
Final Assessment	To be evaluated	Comment	It is unclear whether the potential investment would have passed the initial screening by a private debt fund, further evaluation should be done			

Company name	Solid World Group SpA	Indexes	Benchmark	Pre-emission year (2021)	Assessment	Note
Emission year	2022	NFP/EBITDA	4,0	4,4	Partially Not Ok	
ID Financial Statements	94	NFP/Equity	2,5	13,4	Not ok	
Headquarter	Veneto, Treviso	EBITDA/Turnover (%)	5,0	5,7	Ok	
		NFP/Turnover (%)	100	25,1	Ok	
Final Assessment	Not approvable	Comment	The potential investment would NOT have passed the initial screening by a private debt fund			

Company name	Masterplant Italia Agricoli	Indexes	Benchmark	Pre-emission year (2021)	Assessment	Note
Emission year	2022	NFP/EBITDA	4,0	17,2	Not ok	
ID Financial Statements	74	NFP/Equity	2,5	-0,4	Ok	Negative NFP
Headquarter	Veneto, Rovigo	EBITDA/Turnover (%)	5,0	n.d.	-	
		NFP/Turnover (%)	100	n.d.	-	
Final Assessment	Missing Information	Comment	Further information are needed			

³¹ In this case, DSCR was not calculated because it requires additional information not available to outsiders through analysis of financial statements alone.

The assessment of each index has been assigned as shown in the table below.

Table 3.12: Assessment matrix (personal elaboration).

	Not ok	Partially not ok	Ok
NFP/EBITDA	> 6	$4 < x < 6$	$= < 4$
NFP/Equity	> 5	$2,5 < x < 5$	$= < 2,5$
EBITDA/Turnover (%)	< 2,5	$2,5 < x < 5$	≥ 5
NFP/Turnover (%)	> 125	$100 < x < 125$	$= < 100$

Particularly, a grey zone has been created in order to identify all those cases that are borderline and therefore need to be evaluated in a more holistic manner. Furthermore, the dashboard works as follow:

- the input cell is the one in yellow;
- by clicking, a drop-down menu appears in which the company to evaluate can be chosen (among those of the sample studied in chapter 2);
- at the bottom some basic information appears (emission year, ID financial statements and the headquarter);
- on the right there is the evaluation grid with:
 - the benchmarks;
 - the value of the index in the pre-issue year;
 - the evaluation;
- at the bottom the final assessment which is based on the following conditions:
 - it is “Missing Information” if data is missing;
 - it is “Approvable” if all the indices are “Ok”;
 - it is “Not approvable” if alternatively:
 - NFP/EBITDA or NFP/Equity is “Not Ok”;
 - all the indices are “Partially Not Ok³²”;
 - NFP/EBITDA or NFP/Equity is “Partially Not ok” and at the same time either EBITDA/Turnover or NFP/Turnover is “Not Ok”;
 - it is “To be evaluated” if alternatively:

³² In the case where the investor encounters “partially not ok” ratios, the professional judgment and wisdom of the valuation team and especially the head of the investment fund, who can rely on the experience accumulated over time, knowledge of the industry, and the appropriateness of the instrument in the case at hand for the project at hand, would assume an even more relevant role (more so than it already does).

- NFP/EBITDA, NFP/Equity are both “Ok” and simultaneously, either EBITDA/Turnover or NFP/Turnover is “Not Ok”;
- at least one of the 4 indices is “Partially Not OK”;
- then, a final comment is provided depending on the final assessment.

3.3.2. Results obtained

Table 3.13: Results of pre-screening of issuers in the years 2021, 2022, and 2023 in the Triveneto region (pre-issue year data).

Final Assessment	2020		2021		2022		Total	
Approvable	9	33%	32	58%	9	60%	50	52%
Not approvable	8	30%	7	13%	0	0%	15	15%
To be evaluated	6	22%	10	18%	3	20%	19	20%
Missing Information	4	15%	6	11%	3	20%	13	13%
Total	27	100%	55	100%	15	100%	97	100%

Three clear trends emerge from the table above over the three years analyzed (excluding cases of missing information):

- there has been an increase over time in the number of issuing companies whose investment would have been potentially “approvable” by a private debt fund that had as thresholds those previously defined;
- the number of issuing firms that would not have been analyzed by a private debt fund that had as thresholds those previously defined decreased over time;
- the number of issuing firms that would have needed further analysis to be evaluated by a private debt fund that had as thresholds those previously defined remained constant.

There are several reasons that can justify these trends:

- first of all, as already widely seen in chapter 2, macroeconomic factors, such as the pandemic and interest rates, had a significant impact on the financial statements of issuing companies. Indeed, it cannot be a coincidence that most of the “not approvable” companies are concentrated in the pre-issuance year 2020, a year in which on average the financial statements of companies recorded a strong decline in performance and a general worsening of financial ratios due to the strong impact of the pandemic. Furthermore, it is possible that, precisely because of the pandemic, many of the investors had subscribed to the minibonds of the issuing companies the following year, given the economic recovery situation and by virtue of

the low cost of money, which pushed investors to seek returns in the riskier instruments. Moreover, it can be assumed that in the pre-pandemic period these companies had solid numbers, and therefore the worsening of conditions was only temporary and therefore potentially of little influence once the pandemic phase was over;

- secondly, it is possible that these companies that were equally successful in issuing minibonds had some other enabling factor (probably complementary to the first one described above), such as (just to name a few):
 - a solid and constant corporate growth path over time;
 - a market of belonging with exponential growth prospects and a corporate structure capable of hooking onto and exploiting this growth;
 - a sector with little or no competition and with high barriers to entry;
 - an industrial plan with very high potential for return on investment and a high degree of probability of achieving the objectives;
 - a management with very in-depth knowledge of the sector and a prepared team capable of managing the financial complexities arising from the minibond issuance;
 - overall credit facilities (analyzable in the "Centrale dei Rischi" database) not fully used and with excellent capacity to deal with any financial imbalances in the short term;
 - any guarantees that made the minibond a "secured" type and therefore widened the thresholds of the "approvable" assessment.

However, over the three years as a whole, more than half of the total issuers would have been included in the "approvable" assessment, demonstrating that the thresholds identified are certainly decisive for a company in issuing a minibond. Furthermore, adding to this share the number of companies "to be evaluated" (which probably had one of the mitigating factors defined above), the companies that managed to issue minibonds are over 70% of the total, confirming what has been stated.

Finally, it cannot be ruled out that the "not approvable" group also includes some companies that have issued minibonds without actually having the solid basis to do so and therefore with investors who are particularly little risk-averse towards this instrument. Indeed, a further interesting step of analysis would be to verify whether among the

companies analyzed there are some in a state of business crisis and whether among these there are some from the "not approvable" group.

CONCLUSIONS

This thesis analyzed the phenomenon of minibonds in Italy, focusing on their features in the credit market for SMEs, on the emissions in the Triveneto region over the last three years, and on the conditions that determine the success or the failure of an issue. The two main conclusions that are worth mentioning here are summarized below.

Firstly, from the analysis conducted in the second chapter, it emerged that macroeconomic changes between 2021 and 2023 (i.e., the pandemic, the post-pandemic recovery, inflation, and rising interest rates) had some significant effects on certain financial ratios of the issuing companies studied. Specifically, it has been observed that the sharp increase in interest rates in recent years has not only led to a drop in emissions but has also produced a gradual deterioration of the debt cost coverage ratio (EBIT/Financial expenses), prompting companies to extend the maturity of their financial debt through the issuance, likely allowing for better financial management in a complex macroeconomic environment. However, when comparing the average data from the past three years in the Triveneto region with the average data from the 2013-2017 period (analyzed by Luca Benvenuti in his final thesis), a reassuring picture emerges for the landscape of Italian SMEs and for investors in this instrument. Indeed, the study conducted reveals that issuing companies tend to have a lower initial financial debt compared to the average level about ten years ago, this debt has a longer-term rather than short-term maturity, and the cost of debt is better covered by profitability.

The second most relevant takeaway regards some of the determinants for the success or failure of a minibond issuance identified through the two case studies in the third chapter. The analyses show that some causes of failure can be a fragile financial structure of the issuing company, characterized, for instance, by high levels of debt or ineffective working capital management, a weak governance structure/management lacking the necessary skills to manage complex financial operations, or other causes not endogenous to the issuing company but originating from broader due diligence on the issuer made by the investor (as seen in the case of the reputational risk that Veneto Sviluppo intended to avoid in the case of Company B). It is crucial that these reasons are taken into consideration by SMEs that are exploring the debt capital market for the first time.

In conclusion, all the analyses conducted in this final dissertation allow to draw some important considerations on the role of minibonds as a financing tool for Italian

SMEs. It can be stated that, on the one hand, they represent a significant opportunity for companies wishing to diversify their sources of financing and reduce their dependence on the banking system. On the other, several critical issues still emerge that limit their diffusion, including poor financial culture and difficult access for companies with a fragile financial structure. However, as seen, the comparison with the past shows a positive evolution, with an increasing number of SMEs approaching this instrument and an improvement in the financial conditions of issuers. For minibonds to become a more widespread financing solution, further market development is needed, supported by increased awareness among companies of the opportunities offered by these instruments. A potential policy recommendation in this regard could involve a stronger push from trade business associations to promote not only the use of minibonds among its affiliates but also an improvement in the "financial culture" at the company level, by training entrepreneurs and responsible financial personnel on preparatory activities/the necessary organizational development for accessing the capital market. From a regulatory perspective, however, the analyses conducted in the first chapter suggest that legislators have consistently pursued a path toward greater access to capital markets for businesses. A potential follow-up study in this field could be a quantitative investigation into the impact of various regulations on minibond issuances over the years.

Finally, a further relevant research direction building on this thesis could be to investigate how the financial conditions of the issuers analyzed in the second chapter have evolved in the years following their minibond issuance. This would help understand, for example, the impact on profitability depending on whether the issuance was used for business expansion projects (such as M&A or internal growth) or not. In this case as well, a study based on real cases would be highly effective and informative.

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Appendix

Table 2.1: Sample of companies with the headquarter in the Triveneto region which issued minibonds between 2021 and 2023.

Company name	Issuing month-year
Alessi Domenico SpA	Mar-21
Tecnolux Srl	Mar-21
Masi Agricola SpA	Mar-21
Pasqua Vigneti & Cantine SpA	Mar-21
Alpinestars SpA	Mar-21
Funivie Valle Bianca SpA	Apr-21
3A Sport Srl (3A dei F.lli Antonini spa)	Jun-21
Fantic Motor SpA	Jul-21
IKS TN Srl (XTN Cognitive Security Srl)	Jul-21
Balan Srl	Jul-21
Demo Meko Technology Srl	Jul-21
Nuove Energie Srl	Jul-21
Project Srl	Jul-21
Eurobrico SpA	Jul-21
Udinese Calcio SpA	Jul-21
Crocco SpA	Oct-21
Plissé SpA	Nov-21
Isoclima SpA	Nov-21
ICM SpA	Nov-21
Friulchem SpA	Dec-21
Veneziana Energia Risorse Idriche Territorio Ambiente Servizi SpA	Dec-21
Casa di Cura Villa Regina Srl	Feb-21
Tridentum Auto Srl	May-21
D Hotels Srl	Jun-21
Officine Fvg SpA	Jun-21
Tramarossa Srl	Nov-21
Doimo Cityline Srl	Dec-21
Biovalley Investments Partner SpA	Jan-22
Metalpress SpA	Jan-22
Turatti Srl	Jan-22
ICM SpA	Feb-22
Acque Del Chiampo SpA	Feb-22
Acque Veronesi S.C.A R.L.	Feb-22
Bim Gestione Servizi Pubblici SpA	Feb-22
Fashion Box SpA	Feb-22
Livenza Tagliamento Acque SpA	Feb-22
Masterplant Italia Agricola SpA	Feb-22
Piave Servizi SpA	Feb-22
Visottica Industrie SpA	Feb-22
Brunnen Industrie Srl	Mar-22
Florian SpA	Mar-22
P.M.G. Italia SpA	Mar-22
Zintek Srl	Mar-22
Gorky Siinq SpA	Apr-22
Nosio SpA	Apr-22
Carel Industries SpA	May-22
Solid World Group SpA	May-22
Arrital Srl	Jun-22
Venezia F.C. SpA Società Sportiva Professionistica	Jun-22
Plissé SpA	Jul-22
Dancelli Tecnologie Srl	Jul-22
Antonio Carraro SpA	Aug-22
Apex Alliance Venice 1 SpA	Aug-22
Industrial Cars SpA	Aug-22
Novation Tech SpA	Aug-22
Telebit SpA	Aug-22
Zanutta SpA	Aug-22
Centro Di Medicina SpA	Sep-22
Bibetech SpA	Oct-22
Bonotto Srl	Oct-22
Gamevision Srl	Oct-22

Gemmo SpA	Oct-22
Mobili Fiver Srl	Oct-22
Olm Nature Escape Società Agricola Srl	Oct-22
Rottami Metalli Italia SpA	Oct-22
M.G.M. SpA	Nov-22
Aton SpA Società Benefit	Dec-22
Autuori Group Logistics Srl	Dec-22
Azzurra Group Srl	Dec-22
B.M. Tecnologie Industriali SpA Società Benefit	Dec-22
Bortolomiol SpA	Dec-22
De Angelis Food SpA	Dec-22
Euro Immobiliare SpA	Dec-22
Ferretto Group SpA	Dec-22
FITT SpA Società Unipersonale	Dec-22
Grimet Srl	Dec-22
HNH Hospitality SpA	Dec-22
Ligabue SpA	Dec-22
Morato Pane SpA	Dec-22
Quargentan SpA	Dec-22
S.I.M.E.T. Srl	Dec-22
Wolftank Dgm Srl	Dec-22
Fintref SpA	Jan-23
Fidia Farmaceutici SpA	Mar-23
Gibus SpA	Mar-23
Weico Srl	Apr-23
IWIS Insulation Waterproofing Industrial Systems Srl	May-23
Endrizzi Srl	Jun-23
Unionbau SpA	Jun-23
Mark Medical SpA	Jul-23
Venix Srl	Jul-23
Whole Health System Srl	Aug-23
Silvelox Group SpA	Sep-23
Mak Costruzioni Srl	Nov-23
Arconvert SpA	Dec-23
BioMan SpA	Dec-23
Imilani Srl - Società Benefit	Dec-23

Source: Politecnico di Milano. 8th, 9th and 10th Italian Minibond Report. Entrepreneurship Finance & Innovation Observers.

Table 2.4.: Paired-samples t-test on the average of financial ratios results of the three pre-emission years with the average of the three emission years (personal elaboration).

	EBITDA/Turnover (%)		NFP/Equity		NFP/EBITDA		NFP/Turnover (%)		Short-term financial debt/Total financial debt (%)		Long-term financial debt/Total financial debt (%)		EBIT/Financial expenses		NWC/Turnover (%)	
	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2
Average	9,52	9,69	0,70	0,73	2,84	2,45	21,47	21,44	38,21	33,61	61,79	66,39	5,31	4,26	15,91	16,98
Variance	43,10	47,57	0,59	0,51	5,67	5,29	408,02	345,61	377,15	302,22	377,15	302,22	28,42	21,21	245,39	249,88
Observations	84	84	76	76	68	68	74	74	81	81	81	81	76	76	73	73
Pearson's correlation	0,72		0,76		0,54		0,81		0,45		0,45		0,51		0,84	
Difference assumed for the averages	0		0		0		0		0		0		0		0	
Degrees of freedom	83		75		67		73		80		80		75		72	
Stat t	-0,31		-0,48		1,43		0,02		2,14		-2,14		1,86		-1,04	
P(T<=t) one tail	0,38		0,32		0,08		0,49		0,02		0,02		0,03		0,15	
t critical one tail	1,66		1,67		1,67		1,67		1,66		1,66		1,67		1,67	
P(T<=t) two tails	0,76		0,63		0,16		0,99		0,04		0,04		0,07		0,30	
t critical two tails	1,99		1,99		2,00		1,99		1,99		1,99		1,99		1,99	

Table 2.5.: Paired-samples t-test on the average financial ratios of 2020 pre-emission year with the average of 2021 emission year (personal elaboration).

	EBITDA/Turnover (%)		NFP/Equity		NFP/EBITDA		NFP/Turnover (%)		Short-term financial debt/Total financial debt (%)		Long-term financial debt/Total financial debt (%)		EBIT/Financial expenses		NWC/Turnover (%)	
	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2
Average	6,63	6,87	0,91	0,88	3,60	3,06	24,72	22,44	37,90	34,24	62,10	65,76	2,98	4,40	17,29	17,62
Variance	43,75	26,01	0,76	0,69	7,78	6,70	419,80	413,28	387,16	396,69	387,16	396,69	15,76	30,54	235,94	281,46
Observations	24,00	24,00	19,00	19,00	15,00	15,00	21,00	21,00	23,00	23,00	23,00	23,00	20,00	20,00	18,00	18,00
Pearson's correlation	0,32		0,82		0,64		0,88		0,33		0,33		0,81		0,90	
Difference assumed for the averages	0,00		0,00		0,00		0,00		0,00		0,00		0,00		0,00	
Degrees of freedom	23,00		18,00		14,00		20,00		22,00		22,00		19,00		17,00	
Stat t	-0,17		0,27		0,92		1,04		0,77		-0,77		-1,93		-0,19	
P(T<=t) one tail	0,43		0,40		0,19		0,16		0,23		0,23		0,03		0,42	
t critical one tail	1,71		1,73		1,76		1,72		1,72		1,72		1,73		1,74	
P(T<=t) two tails	0,87		0,79		0,37		0,31		0,45		0,45		0,07		0,85	
t critical two tails	2,07		2,10		2,14		2,09		2,07		2,07		2,09		2,11	

Table 2.6.: Paired-samples t-test on the average financial ratios of 2021 pre-emission year with the average of 2022 emission year (personal elaboration).

	EBITDA/Turnover (%)		NFP/Equity		NFP/EBITDA		NFP/Turnover (%)		Short-term financial debt/Total financial debt (%)		Long-term financial debt/Total financial debt (%)		EBIT/Financial expenses		NWC/Turnover (%)	
	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2
Average	10,05	9,95	0,69	0,76	2,80	2,41	21,31	21,81	36,98	33,43	63,02	66,57	5,63	4,26	14,99	16,42
Variance	35,31	53,56	0,48	0,42	5,48	5,20	433,58	339,70	393,72	300,28	393,72	300,28	32,61	22,30	273,45	233,29
Observations	47,00	47,00	45,00	45,00	42,00	42,00	44,00	44,00	47,00	47,00	47,00	47,00	43,00	43,00	44,00	44,00
Pearson's correlation	0,84		0,68		0,52		0,85		0,56		0,56		0,53		0,89	
Difference assumed for the averages	0,00		0,00		0,00		0,00		0,00		0,00		0,00		0,00	
Degrees of freedom	46,00		44,00		41,00		43,00		46,00		46,00		42,00		43,00	
Stat t	0,17		-0,90		1,10		-0,30		1,38		-1,38		1,75		-1,23	
P(T<=t) one tail	0,43		0,19		0,14		0,38		0,09		0,09		0,04		0,11	
t critical one tail	1,68		1,68		1,68		1,68		1,68		1,68		1,68		1,68	
P(T<=t) two tails	0,87		0,37		0,28		0,77		0,17		0,17		0,09		0,23	
t critical two tails	2,01		2,02		2,02		2,02		2,01		2,01		2,02		2,02	

Table 2.7.: Paired-samples t-test on the average financial ratios of 2022 pre-emission year with the average of 2023 emission year (personal elaboration).

	EBITDA/Turnover (%)		NFP/Equity		NFP/EBITDA		NFP/Turnover (%)		Short-term financial debt/Total financial debt (%)		Long-term financial debt/Total financial debt (%)		EBIT/Financial expenses		NWC/Turnover (%)	
	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2	Variable 1	Variable 2
Average	12,96	13,97	0,41	0,38	1,94	1,76	14,68	17,32	44,08	33,02	55,92	66,98	7,86	4,06	17,31	18,21
Variance	48,25	37,89	0,73	0,48	2,86	3,65	263,50	272,10	309,18	162,37	309,18	162,37	22,07	6,06	180,59	313,67
Observations	13,00	13,00	12,00	12,00	11,00	11,00	9,00	9,00	11,00	11,00	11,00	11,00	13,00	13,00	11,00	11,00
Pearson's correlation	0,72		0,81		0,23		0,25		0,28		0,28		0,20		0,59	
Difference assumed for the averages	0,00		0,00		0,00		0,00		0,00		0,00		0,00		0,00	
Degrees of freedom	12,00		11,00		10,00		8,00		10,00		10,00		12,00		10,00	
Stat t	-0,74		0,24		0,27		-0,39		1,98		-1,98		2,83		-0,20	
P(T<=t) one tail	0,24		0,41		0,40		0,35		0,04		0,04		0,01		0,42	
t critical one tail	1,78		1,80		1,81		1,86		1,81		1,81		1,78		1,81	
P(T<=t) two tails	0,48		0,81		0,79		0,70		0,08		0,08		0,02		0,84	
t critical two tails	2,18		2,20		2,23		2,31		2,23		2,23		2,18		2,23	

Table 2.8.: Simple ANOVA test on the average of financial ratios results of the three pre-emission years (personal elaboration).

EBITDA/Turnover (%)	Groups	Count	Sum	Average	Variance		
	Row 1	25	168,82	6,75	42,29		
	Row 2	48	484,33	10,09	34,64		
	Row 3	13	168,53	12,96	48,25		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	361,10	2,00	180,55	4,65	0,01	3,11
	In groups	3222,14	83,00	38,82			
Total	3583,24	85,00					
NFP/Equity	Groups	Count	Sum	Average	Variance		
	Row 1	20	18,13	0,91	0,72		
	Row 2	47	35,22	0,75	0,53		
	Row 3	12	4,93	0,41	0,73		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	1,85	2,00	0,93	1,53	0,22	3,12
	In groups	46,22	76,00	0,61			
Total	48,07	78,00					
NFP/EBITDA	Groups	Count	Sum	Average	Variance		
	Row 1	17	54,56	3,21	8,18		
	Row 2	45	126,74	2,82	5,22		
	Row 3	12	19,41	1,62	3,88		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	19,08	2,00	9,54	1,68	0,19	3,13
	In groups	403,39	71,00	5,68			
Total	422,46	73,00					
NFP/Turnover (%)	Groups	Count	Sum	Average	Variance		
	Row 1	21	519,02	24,72	419,80		
	Row 2	45	1012,70	22,50	487,94		
	Row 3	12	195,50	16,29	528,20		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	555,70	2,00	277,85	0,58	0,56	3,12
	In groups	35675,45	75,00	475,67			
Total	36231,15	77,00					
Short-term financial debt/Total financial debt (%)	Groups	Count	Sum	Average	Variance		
	Row 1	24	914,09	38,09	371,19		
	Row 2	48	1798,92	37,48	397,12		
	Row 3	11	484,86	44,08	309,18		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	396,45	2,00	198,22	0,52	0,59	3,11
	In groups	30293,87	80,00	378,67			
Total	30690,32	82,00					
Long-term financial debt/Total financial debt (%)	Groups	Count	Sum	Average	Variance		
	Row 1	24	1485,91	61,91	371,19		
	Row 2	48	3001,08	62,52	397,12		
	Row 3	11	615,14	55,92	309,18		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	396,45	2,00	198,22	0,52	0,59	3,11
	In groups	30293,87	80,00	378,67			

	Total	30690,32	82,00				
EBIT/Financial expenses	Groups	Count	Sum	Average	Variance		
	Row 1	22	63,77	2,90	15,74		
	Row 2	44	240,80	5,47	32,95		
	Row 3	13	102,20	7,86	22,07		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	211,67	2,00	105,83	4,00	0,02	3,12
	In groups	2012,32	76,00	26,48			
	Total	2223,99	78,00				
NWC/Turnover (%)	Groups	Count	Sum	Average	Variance		
	Row 1	18	311,16	17,29	235,94		
	Row 2	45	714,19	15,87	302,22		
	Row 3	11	190,43	17,31	180,59		
	Source of variation	SS	df	MS	F	P-value	F crit
	Between groups	35,83	2,00	17,91	0,07	0,94	3,13
	In groups	19114,66	71,00	269,22			
	Total	19150,48	73,00				