The financing methods for small and medium companies: comparison between Italy and Germany

Abstract

Purpose

The aim of the research is to identify the appropriate financing methods for small and medium-sized enterprises (with particular reference to alternative instruments to the banking ones), by comparing Italian and German companies.

Methodology

Based on a sample of Italian and German small-medium sized enterprises and thanks to a quantitative method, the research methodology was developed by the following logical steps: i) illustration of the informative matrix used, thanks to which it's possible to identify different types of financing instruments (also those alternative to the banking ones) the most suitable for the analyzed companies; ii) adoption of the informative matrix to the sample of Italian and German companies; iii) comparison Italy-Germany.

Findings

Several differences emerged between Italian and German small and medium-sized companies, regarding the most suitable suggested financing forms. The degree of effectiveness of the financing instruments alternative to the debt appears influenced by the analysed space-time context. With reference to Italy, the effectiveness of these instruments is rather modest. With reference to Germany, it occurs the opposite scenario.

Originality

The originality of the paper is linked to the current profound changes in both economic and normative terms. The research tries to lead companies to change their financial culture, also considering financial instruments alternative to the bank debt particularly suitable for small and medium-sized enterprises.

Keywords: financing sources; small and medium-sized enterprises; Italian small and medium-sized enterprises; German small and medium-sized enterprises; financial culture; alternative financing instruments; minibonds; commercial paper; listing.

1. Introduction

The identification of the most appropriate financing instruments for small and medium-sized enterprises is a relevant topic, as they impact on their financial structure. As the financial structure influences the company's growth, the financing process constitutes one of the dominant research topics in the literature. Different possibilities, distinguished by debts (such as the accounts payable, the banking system and the other various financial entities different than bank) and equity (such as own resources granted by the shareholders) are available.

Italian companies have a high financial dependency towards the banking system. This is due to several factors, such as the abundance of past granted loans and ability of the banks to meet the companies' financial needs. Nevertheless, the last decade has been characterized by a gradual disentanglement of the banks towards providing funds (especially with regards to company's fixed assets), due to the financial crisis. This aspect, combined to a limited financial culture within the company, in terms of alternative financial instruments to the banking ones, causes difficulties in financing the company's growth.

New financial methods in terms of debts and equity are available thanks to a legislative process: consequently, small and medium-sized enterprises have the possibilities to diversify their funding process. In addition to the banking system, companies can also choose some financial instruments alternative to the bank (commercial papers, mini-bond, debt funds, hybrid debt securities). In the meantime, new operators are available to underwrite debt securities and shares of the small and medium-sized enterprises.

German economic context represents a useful benchmark for Italian ones, as the German economic sector is composed of small and medium-sized companies. In addition, the German economy is considered as the most advanced one in the European Union. Making a comparison of the two economic systems is quite difficult, as it involves cultural, social and institutional variables (Arrighetti and Ninni, 2012; Arrighetti, A. et al., 2012; Boffelli and Urga, 2015; Bozio et al., 2015; Falzoni and Grasseni, 2012; Florio et al., 1998; Foresti and Trenti, 2012; Guerrieri and Esposito, 2012; Hall and Oriani, 2004; Ivanov, 2009; Lotti and Santarelli, 2001; Manello and Rolfo, 2012).

Nevertheless, the research fits into this context of observation. The aim of the research is to identify the appropriate financing methods for small and medium-sized enterprises (with particular reference to alternative instruments to the banking ones), by comparing Italian and German companies.

The originality of the paper is linked to the current profound changes both in the economic and normative terms. Companies need to change their financial culture, also considering financial instruments alternative to the bank debt particularly suitable for small and medium-sized enterprises. This could allow an improvement in the financing opportunities, permitting the companies to reduce their dependence on the banking system and increasing the collection of money.

The paper is structured as follows. The second paragraph is focused on the analysis of the literature, with particular reference to two interesting lines of research: the first one is focused on the identification of the company's financial structure, and the second one is about the traditional and alternative financing methods. The third paragraph is dedicated to the research method. Findings are illustrated in the fourth paragraph, which is followed by discussion of the results. Finally, the conclusions and implications of the study are set out, along with the limitations of the research.

2. Literature

The company's financial structure represents a relevant topic in the literature, as it could influence the company growth (Becchetti and Trovato, 2002; Carpenter and Petersen, 2002; European Investments Bank, 2003; Fagiolo and Luzzi, 2004; Fazzari et al., 1988; Gambini and Zazzaro, 2008): indeed, the collection of funds impacts on the investments opportunities, and the lack of money could obstacle the aforementioned growth (Honjo and Harada, 2006; Lang et al., 1996; Giacosa, 2015; Oliveira and Fortunato, 2006; Mahérault, 2000; Venanzi, 2010). Researchers are usual to quantify the growth in quantitative terms (i.e. the revenues, the value added, the production value, the fixed assets, the intangible assets, etc.) or in qualitative ones, considering that the growth causes the formation or the development of the company attitudes (Donaldson, 1994; Grandinetti and Nassimbeni, 2007).

Since the company growth creates a financial requirements, financial needs definition and quantification have been deeply analyzed (Bianchi, 1975; Campedelli, 1998; Ferrero, 1972), and complied to the corporate strategy (Ansoff, 1974; Chandler, 1962; Coda, 1988; Corbetta, 1999; Invernizzi, 2008): otherwise, a lack in the collection of funds could force a revision of the strategic choices.

Some research lines of studies characterize the literature about the financial structure:

a) the first group of researchers studies the company's financial structure and the combination between financial resources and investments;

b) the second group of researchers focused on the most appropriate financing instruments (traditional and alternative) to the company's condition.

According to the first group, the company's financial structure requires an optimal combination between investments and funding. When considering funding, the choice between the use of equity or the external borrowings is so relevant, as it impacts on the financial and economic sphere (Baginski and Hassel, 2004; Bernstein and Wild, 1998; Brealey et al., 1999; Capasso et al., 2015; Giacosa and Mazzoleni, forthcoming; La Rocca, 2007; Miglietta, 2004; Rossi, 2014a and 2014b; Rossi et al., 2015; Singer, 2000).

In these terms, the company's ability to repay the debt through the financial resources derived from its core business has been investigated: several indicators permit to evaluate this aspect, including operating revenue in terms of turnover (Ferrero et al., 2006; Giacosa, 2011 and 2012; Giacosa and Mazzoleni, 2012). A right definition of financial structure also permits to protect the power within the company (Becchetti and Trovato, 2002; Carpenter and Petersen, 2002; Fazzari et al., 1988; Herrera and Minetti, 2007; Honjo and Harada, 2006; Lang et al., 1996; Machauer and Weber, 2000; Oliveira and Fortunato, 2006), when considering different types of shareholders (Levinthal, 1988; Prendergast, 2000; Rasmusen, 1987; Ross, 2004; Shavell, 1979).

In addition, the relationship between the investments and financing could be developed thanks to a series of indicators, used to analyse the financial statements (Baginski and Hassel, 2004; Ferrero et al., 2003; Foster, 1986; Giroux, 2003; Helfert, 1997; Higgins, 2007; Ingram et al., 2002; Meigs et al., 2001; Value, 2001).

Some researches made a comparison between the financial structure of small and medium-sized enterprises and large ones on several European and American countries; they analyzed their financial structures and performances and the effects of the economic and financial crisis (de Socio et al., 2014; De Bonis et al., 2012; Rivaud-Danset et al., 2001).

According to the second group, the choice in terms of financing, distinguishes debts (such as the accounts payable, the banking system and the other various financial entities different than bank) from equity (such as own resources granted by the shareholders) (Caselli et al., 2013; Giacosa, 2015; Giacosa et al., forthcoming).

In terms of equity, the issue of new shares could be an alternative choice (Anderson and Reeb, 2003; Bracci, 2007; Gualandri and Schwizer, 2008; Mulkay and Sassenou, 1995; Osteryoung et al., 1992), even if it reduces a company control (Gallucci et al., 2012).

If the company choices the debt solutions, it emerges a great interest in observing the solvency of the firm, thanks to the company's attitude to repay debts: in these terms, financial resources deriving from the core business represent a valid element to judge this capability, identifying the company's ability to self-financing (Ferrero et al., 2006; Giacosa, 2011 and 2012).

The choice of funders is relevant: companies generally recourse to the banking system or to other various financial entities. Several studies focused on the financial policy conducted by the companies, especially in terms of the financial constraints to growth, the financial structure as an element of the company investigation, and the financial policies of the company (Dallocchio et al., 2011; Galbiati, 1999; La Rocca, 2007; Venanzi, 2003; Zazzaro, 2008).

A more recent literature focuses on innovative financial instruments than banking channel: commercial paper, mini-bonds, hybrid instruments, and the listing on AIM represent one of the most popular topic (Appio, 2013; Bompani and Catelani, 2012; De Luca and Ferri, 2009; Ordine dei Dottori Commercialisti di Milano, 2011; Urbani, 2013).

Even if innovative financial instruments represent a means to cover the company financial needs, few researchers focused on the choice between debt, equity or hybrid instruments, as part of the definition of the financial structure, especially according to small and medium-sized enterprises.

The aim of this research is to fill this gap: it highlights the access to new alternative financial instruments, which permit the company to diversify its financing process and increase the collection of funds. In particular, the increase of the financing opportunities allows the company to change the financial culture, decreasing the predominance of the banking channel and strengthening the adoption of alternative forms of financing.

Methodology

3.1 The sample

The aim of the research is to identify the appropriate financing methods for small and medium-sized enterprises (with particular reference to alternative instruments to the banking ones), by comparing Italian and German companies.

The companies have been identified using the Aida-Bureau van Dijk database for the Italian ones, and Amadeus-Bureau van Dijk database for the German enterprises. They have been classified according to business sector, adopting the NACE classification of the European Institute of Statistics (Eurostat).

Conducting the research required identification of two samples:

a) the sample of Italian companies;
b) the sample of German companies.

For the first sample, the population taken into consideration consists of 758,153 Italian companies (this is the number of Italian companies, present in AIDA database on the analysis reference day). For the second sample, the population taken into consideration consists of 201,854 German companies (this is the number of German companies, present in Amadeus database on the analysis reference day).

The following selection criteria have been considered in the creation of the samples:

- the companies' financial statements related to 2011, 2012 and 2013 were available, and the one from 2013 was the last one deposited at the moment of assessment. This three-year period was considered as the minimum necessary to carry out the research on analyzed companies;
- the companies' financial statements were not prepared in accordance with IAS (International Accounting Standards), to ensure the cohesion of analysed data;
- the companies belong to economic activities of NACE, considered as relevant. The assessment was conducted on the basis of the companies' concentration in the individual economic activities of NACE. In this way, the companies belonging to its residual economic activities have been excluded;
- the companies' production value in 2013 was between 5 and 250 million euro. The reason for using the "production value" instead of "sales" was to extend the analysis about the companies working on order;
- the company's financial statements presented details on "Total debt". For analytical purposes, the companies, whose detailed financial debt was not available, were excluded from the survey.

As the manufacture sector consists of 23 significantly diversified activities, it has been further divided in the sectors such as: food, automotive, pharmaceutical, rubber-plastic, machinery, metal-mechanic, petrochemical, textile and other manufacturing.

The final sample is composed of 41,344 Italian companies and 12,219 German companies (Table 1).

Table 1 – The sample

Sector	***Italy***	***Germany***
Agricolture	743	77
Food	2,189	277
Accommodation and catering	522	103
Attività culturali	190	70
Financial Activities	176	102
Professional Activities	1,539	918
Automotive	510	166
Trade	12,891	3,424
Building	2,762	1,076
Pharmaceutical	214	72
Rubber - plastic	1,839	433
ICT	950	454
Real estate	716	891
Machinery	3,921	1,232
Other manufacturing	2,763	448
Metal-mechanic	3,220	810
Petrol-Chemical	998	249
Business services	892	411
Textile	2,077	133
Transportation and storage	2,232	711
Utilities	0	162
Total for geography area	**41,344**	**12,219**

Source: Own elaboration

3.2 The method

The aim of the research is to identify the appropriate financing methods for small and medium-sized enterprises (with particular reference to alternative instruments to the banking ones), by comparing Italian and German companies.

In order to achieve the aim of this research, the following research question has been formulated:

RQ: Which are the main differences between Italian and German small and medium-sized enterprises, regarding the most suitable suggested financing forms?

The research methodology was developed by the following phases:

a) illustration of the informative matrix used, thanks to which it's possible to identify different types of financing instruments (also those alternative to the bank's one) the most suitable for the analyzed companies;

b) adoption of the informative matrix to the sample of Italian and German companies;

c) comparison Italy-Germany.

All the aspects of the observation are illustrated below.

A) Illustration of the framework

Our framework is represented by a model illustrated in the previous publication (Giacosa and Mazzoleni, forthcoming), which is able to identify the appropriate financing methods for small and medium-sized enterprises (with particular reference to alternative instruments to the banking ones).

The model takes into consideration the following analysis areas:

a) with a reference to the company's growth, CAGR indicator (*Compound Annual Growth Rate*) was used, which is calculated using the following formula:

$$CAGR = \sqrt{\frac{PV_m}{PV_n}} - 1$$

where:

PV_n, PV_m = Production value achieved by the company in years "n" and "m", assuming that m>n.

b) with a reference to the company's profitability, the indicator EBITDA to production value was used, as it enables to measure the company's ability of generating cash flow. The formula is as follows:

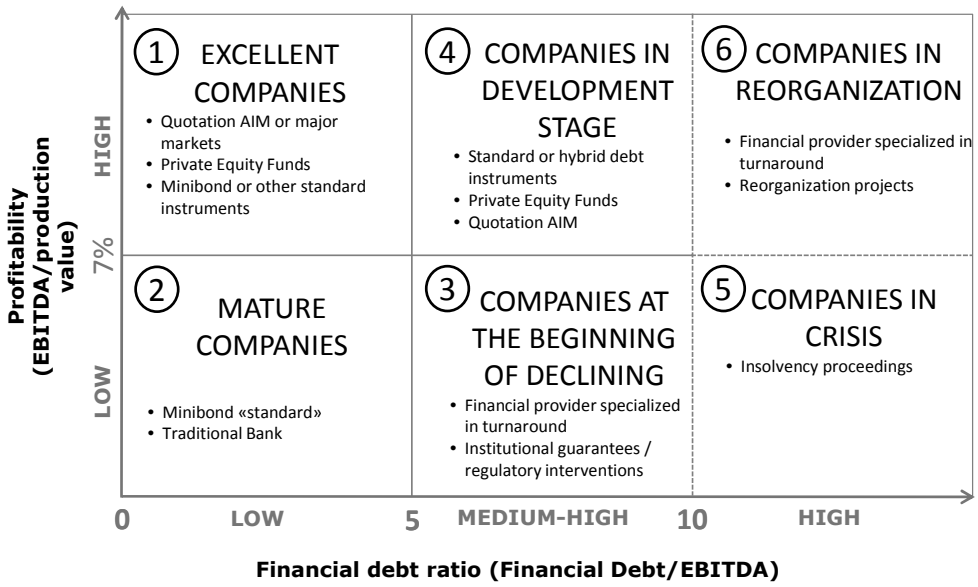
Profitability in the year "n"= Ebitda (n)/Production value (n)

c) with a reference to the capacity of financial debt's repayment, the indicator Financial Debt to EBITDA was used, as it enables to identify the period necessary to repay the borrowings by the use of the resources generated from core business activity.

Ability to repay the financial debt in the year n = Financial Debts (n)/Ebitda (n)

The framework model is composed by six quadrants. A bubble, which appears in the informative matrix within each quadrant, represents the group of companies belonging to the same quadrant. Its position indicates the average profitability and the average financial debt ratio of the companies belonging to the matrix. The average growth instead is illustrated by the size of the bubble. In the situation, when the average growth of the quadrant's companies was negative, an average growth equal to 0,20% was assumed. Thanks to this assumption it was possible to define the position of the bubble on the graph. Each quadrants of the informative matrix has been matched to the financing instruments, considered as suitable for the companies belonging to this quadrant (Figure 1).

Figure 1 - The subjective dimension in financing choices



Source: Giacosa and Mazzoleni, forthcoming

The framework distinguishes different categories of companies, using the model of classification of the credit risk, which is similar to the rating agencies such as Moody's, Standard & Poor's and Fitch Ratings – the best known global rating agencies, and CERVED, which is recognized in Italy. The ratings from AAA to BBB are identified as investment grade, what means relatively safe investments, attractive for institutional investors. The ratings from BBB are called speculative grade, what means investment with a high level of risk, and more profitable because of this, in the same time. The following categories of companies have been identified by the framework:

1) investment grade companies*:* different categories of companies have been identified:

a) Star companies and Excellent companies – presented in the first quadrant, which is characterized by average profitability above 7% and average financial debt below 5. The so-called "*star companies*" are characterized by high growth rate (above 5%). Their financial state of health allows them to use, as alternative to the banking channel, the following financial methods: debt (mini-bond or commercial papers) standard or hybrid[1]; recourse to the capital market through private equity companies; quotation on the major or minor markets (AIM). Generally speaking, the access to the credit even from the banking channel is not a problematic issue for these companies.

b) Mature companies – presented in the second quadrant, characterized by average profitability below 7% and average financial debt below 5. These companies show a decrease in profitability, but their advantage is a modest debt. The banking channel represents the most common way to finance them, as it takes into consideration the historical values, but there is also a possibility to use the standard form of mini-bond, as well[2];

2) high risk companies[3]: the following categories have been identified:

a) Companies at the beginning of decline – presented in the third quadrant are characterized by average profitability below 7% and average financial debt between 5 – 10, therefore they have significant difficulties to obtain the credit from the banking system. That is why they recourse to financial markets in reference to

[1] The mini-bond, in general, are distinguished as "standard " instruments (subscribed by companies with an excellent financial performance) and "hybrid"(accept some reservations, as subscribers are potentially interested in the company's performance and its value, even prospective one).

[2] As standard form was assumed the mini-bond's emission without guarantee or conversion clauses. In financial terms can also be discussed a mini bond Plain Vanilla.

[3] An indicator used to calculate the ability to repay debt is cohesive with the European Central Bank proposals in reference to classifying the companies as *high risk* by the individual nation's banks. Indeed, the ECB has provided the presence, among others, of indicator *Financial Debt to EBITDA* above 6 in reference to *asset quality review* of the main European banks credits, as a *trigger event*. See the European Central Bank (March 2014),*Asset Quality Review. Phase 2 Mannual,* pp. 100 et seq.

both: capital and debt (the exception is the situation, when the companies have started a recovery process and it's directed to specialized interlocutors in financing the companies with a high level of debt). Only the parties operating in the context of crisis or at the beginning of crisis (such as private equity funds or funds specializing in the acquisition of distressed debt (acquisition of equity capital in non-performing companies)) could be potentially interested in investing in this kind of companies.

b) Companies in the development stage – presented in the fourth quadrant, characterized by average profitability above 7% and average financial debt between 5-10. In this case the company can use the following types of instruments: hybrid debt or equity instruments, private equity operators and the quotation on the smaller markets (under condition that are available necessary information support in order to prospects).

c) Companies in crisis – presented in the fifth quadrant, characterized by average profitability below 7% and average financial debt above 10. This kind of companies are in advanced state of crisis and can be a subject to bankruptcy procedures, which usually involve a liquidation of company's assets. Because of negative judgements on its creditworthiness (due to a highly tensioned financial situation) and on the development prospect of the business (showing loss of turnover), it is impossible for them to obtain bank loans and use the financial instruments alternative to bank debt.

d) Companies in reorganization – presented in the sixth quadrant, characterized by average profitability above 7% and average financial debt above 10. This companies are described as distressed companies, but they have defined and have started the industrial reorganization process. These companies can obtain the credit through banking channel or derived from other forms financing, as well as through the assistance of a financial provider specializing in turnaround.

B) Application of the informative matrix to the sample of Italian and German companies

In order to identify the most suitable financial instruments for the sample of Italian and German companies, the framework before was applied.

The placement of a company in the proper quadrant of the informative matrix was conducted as follows. Firstly, was necessary to calculate for each company the average values of the three indicators mentioned before (except "*growth*", because the CAGR presents an average growth rate in the three-year period). For this reason, the following formulas have been used:

$$CAGR = \sqrt{\frac{PV_{2013}}{VDP_{2011}}} - 1$$

$$Avarage\ Profitability = \frac{EBITDA_{2011} + EBITDA_{2012} + EBITDA_{2013}}{PV_{2011} + PV_{2012} + PV_{2013}}$$

$$Avarage\ Fiancial\ Debt\ Ratio = \frac{Financial\ Deb._{2011} + Financial\ Deb._{2012} + DFinancial\ Deb._{2013}}{EBITDA_{2011} + EBITDA_{2012} + EBITDA_{2013}}$$

The next step was to compare calculated average values for each company with the cut-off points identified before, to define the placement of the companies in the informative matrix.

When the companies were finally placed in the informative matrix, it was necessary to calculate for each quadrant the average value of the three indicators of all of the companies belonging to that quadrant. It was done using the following formulas:

$$CAGR = \sqrt{\frac{PV_{c2013}}{PV_{c2011}}} - 1$$

$$Avarage\ Profitability = \frac{EBITDA_{c2011} + EBITDA_{c2012} + EBITDA_{c2013}}{PV_{c2011} + PV_{c2012} + PV_{c2013}}$$

$$Avarage\ Fiancial\ Debt\ Ratio = \frac{Financial\ Deb._{c2011} + Financial\ Deb._{c2012} + DFinancial\ Deb._{c2013}}{EBITDA_{c2011} + EBITDA_{c2012} + EBITDA_{c2013}}$$

where:

PV_{c2013}, PV_{c2012}, PV_{c2011} = Production value achieved by the companies from the cluster C in 2013, 2012 and 2011; $EBITDA_{c2013}$, $EBITDA_{c2012}$, $EBITDA_{c2011}$ = Ebitda realized by the companies from the cluster C in 2013, 2012 and 2011 $Financial\ Deb._{c2013}$, $Fiancial\ Deb._{c2012}$, $Fiancial\ Deb_{c2011}$ = financial debts reached by the companies from the cluster C in 2013, 2012 and 2011 ;
c = the quadrant of the informative matrix; can have values 1, 2, 3, 4, 5, 6.

We said that a bubble appearing in the informative matrix within each quadrant represents the group of companies belonging to the same quadrant. Its position indicates the average profitability and the average financial debt ratio of the companies, which belong to the matrix. The size of the bubble illustrates the average growth, instead. In the situation, when the quadrant's companies presented negative average growth, we assumed that it is equal to 0,20%. In this way, it was possible to define the position of the bubble on the graph.

C) Comparison Italy-German

In order to make a comparison of the two countries mentioned above, we considered the location of the Italian and German companies in the informative matrix and the average values obtained in each quadrant of the matrix, calculated in the way described in the previous point B). In addition, we analyzed the main stock markets (and the features of their segment) for trading the debt securities of the small and medium–sized enterprises: it impacts on the financial opportunities for Italian and German companies.

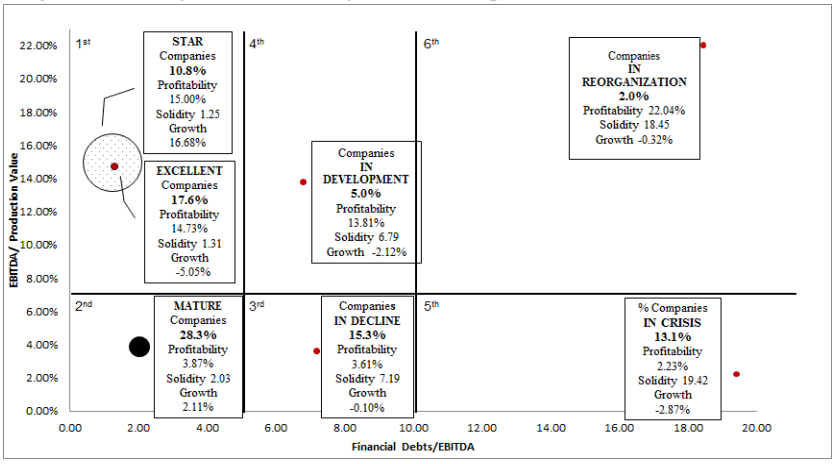
4. Findings

The application of the informative matrix was conducted with the reference to:

- Italian companies of the sample;
- German companies of the sample.

The sample on which the survey was carried out consisted of 41,344 Italian companies. The figure presented below (Figure 2) shows the position of the companies in the informative matrix. Thanks to this graphical presentation, it is possible to carry out the three-dimensional analysis of each quadrant, what means that the position of a bubble within each quadrant defines the average values of both: profitability and ability of financial debt's repayment by the companies belonging to the quadrant. The bubble's dimension presents the average growth of the quadrant, instead.

Figure 2 - The informative matrix for Italian companies



Source: Own elaboration

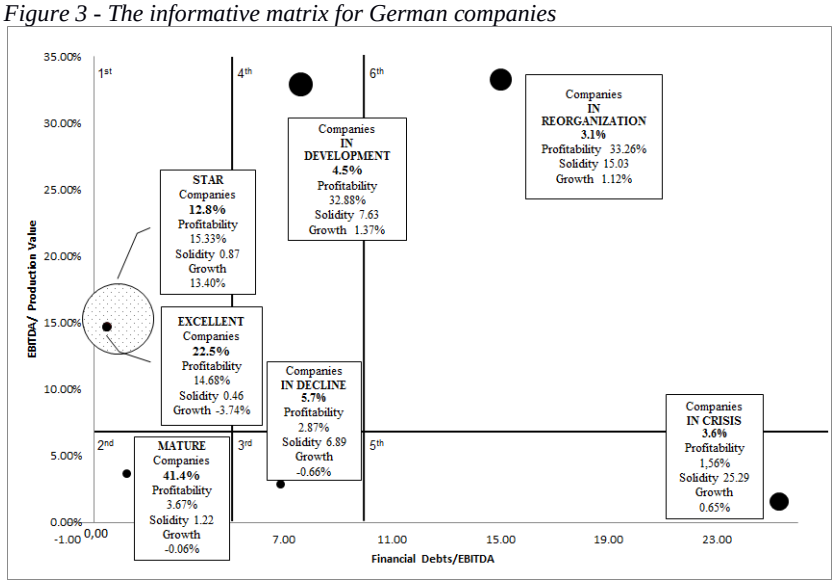
According to the figure presented above, it emerged that:

- the first quadrant shows that 28.40% of the analysed companies are classified as Star and Excellent companies. The companies classified as a star companies had a growth rate above 5% and accounted 10.8% of them. The growth of the remaining 17.60% of the companies was below 5% and even negative (-5.05%). The star companies have a high average profitability, equal to 15% and a low average ability to repay the financial debt (1.25), in the same time. The rest of the companies belonging to the first quadrant presents a little bit lower annual average income, equal to 14.73%, and little bit higher level of average debt ratio (1.31);
- a relevant part of the Italian companies (28.3%) belongs to the second quadrant, within which an average profitability is below 7% (precisely 3.87), average ability to repay the financial debt is below 5 (precisely 2.03) and an annual average growth is positive, meaning equal to 2.11%;
- in the third quadrant is located 15.3% of the Italian companies, with indicator EBITDA/Production on average of 3.61% and average financial debt ratio equal to 7.19. What is more, all of the companies registered an annual growth a little bit below 0 (-0.10%);
- the fourth quadrant represents further 5% of the analysed Italian companies. Their average profitability is quite high (equal to 13.81%), but they have the financial debt ratio above 5 (precisely equal to 6.79). An annual average growth of all of the companies was negative (-2.12);
- the fifth quadrant account 13.1% of the Italian companies, their profitability, comparing to other quadrants of the informative matrix, is lower (2.23%), average financial debt's ratio is higher (19.49) and they presented the negative growth (equal to -2.87%);
- in the sixth quadrant is placed only 2% of the companies, and it is the less populated quadrant of the informative matrix. In reference to the other quadrants, the companies belonging to the 6th one are characterized by higher profitability (22.04%), high financial debt's ratio (18.45) and their annual average growth is a little bit below 0 (-0.32%).

On the graph presented above, 3,228 Italian companies are not introduced, because of their negative EBITDA (they did not generate resources necessary to repay the financial debt's contracts).

Subsequently, the survey was conducted on a sample of 12.219 German companies. The figure 3 represents the position of the companies in the informative matrix.

Figure 3 - The informative matrix for German companies



Source: Own elaboration.

In reference to the figure presented above, it emerged that:

- the first quadrant shows that 35.3% of the analysed German companies are classified as Star and Excellent companies. 12,8% of them had a growth above 5% in the period 2011-2013, therefore are classified as star companies, while the remaining 22.5% is characterized by a growth below 5%, even negative (equal to -3.74%). The companies classified as a star companies have a high average profitability ratio (above 15.33%) and accounted average ability to repay the financial debt equal to 0,87. The rest of the companies belonging to the first quadrant present slightly lower annual average income (comparing to the previous ones), equal to 14.73%, and lower level of average debt ratio (0.46);
- the analysis showed that a significant part of the German companies (41.4%) is placed in the second quadrant. The companies are characterized by an average profitability of 3.67%, good financial condition (ability to repay their financial debt is equal to 1.22) and an annual average growth a little bit below 0 (-0.06%);
- only the 5.7% of the German companies are classified as companies at the beginning of decline (the third quadrant). Those are characterized by a profitability on average of 2,87%, by a financial debt ratio of 6.89 and by a negative annual average growth (-0.66%);
- the 4.5% of the companies are defined as companies in development (the fourth quadrant). Those are characterized by high level of average profitability (32.88%), by medium-high level of financial debt (7.63) and a positive annual average growth (1.37%);
- in the fifth quadrant are placed 3.6% of the German companies, characterized by a little bit worse profitability comparing to other quadrants, equal to 1.56% and an average financial debt ratio of 25.29. Those companies have an average annual growth of 0,65%;
- the sixth quadrant is the one with the minor number of companies (3.10%). The companies belonging to this quadrant are characterized by higher profitability in comparison with the other quadrants (33.26%), a very high level of financial debt ratio (15.03) and a positive annual average growth (1.12).

On the graph (Figure 4) there are not represented 782 companies because of their negative EBITDA (they did not generate resources necessary to repay the financial debt's contracts).

It is interesting to compare the results obtained for the two sample, in order to identify the characteristics of the companies belonging to the various quadrants. The principal results are presented below (Table 2).

Table 2 - Comparison Italy/Germany: companies' position in the informative matrix

Categories of companies in the informative matrix	***Italy***		***Germany***	
	NR	%	NR	%
Star Companies	4,466	11%	1,560	13%
Excellent Companies	7,278	18%	2,748	22%
Mature companies	11,704	28%	5,058	41%
Companies at the beginning of decline	6,340	15%	699	6%
Companies in development	2,076	5%	554	5%
Companies in crisis	5,436	13%	439	4%
Companies in reorganization	816	2%	379	3%
Negative Ebitda	3,228	8%	782	6%
Total	**41,344**	**100%**	**12,219**	**100%**

Source: Own elaboration

Table 3 contains, for each quadrant, the comparison of the indicators used in the survey, in the context of the two samples.

Table 3 – Comparison Italy/Germany: profitability, financial debt ratio and growth of the companies analysed in the period 2011-2013

Categories of companies in the informative matrix	***Profitability***		***Financial Debt Ratio***		***Growth***	
	Italy	Germany	Italy	Germany	Italy	Germany
Star Companies	15.00%	15.33%	1.25	0.87	16.68%	13.40%
Excellent Companies	14.73%	14.68%	1.31	0.46	-5.05%	-3.74%
Mature companies	3.87%	3.67%	2.03	1.22	2.11%	-0.06%
Companies at the beginning of decline	3.61%	2.87%	7.19	6.89	-0.10%	-0.66%
Companies in development	13.81%	32.88%	6.79	7.63	-2.12%	1.37%
Companies in crisis	2.23%	1.56%	19.42	25.29	-2.87%	0.65%
Companies in reorganization	22.04%	33.26%	18.45	15.03	-0.32%	1.12%
Negative Ebitda	-6.35%	-7.11%	-7.19	-5.56	-7.43%	-1.01%
Total	**6.65%**	**8.30%**	**4.73**	**3.50**	**0.17%**	**0.52%**

Source: Own elaboration

The overall comparison shows that the economic and financial situation of the German companies is better than in Italy. About 76% of them is placed in the quadrants with better level of profitability and financial position (star, excellent and mature), as opposed to 57% in Italy.

In particular, 13% of the companies analysed in Germany, in comparison with 11% of those Italian, is classified as star companies, with profitability greater than 7%, debt ratio of less than 5, and growth of more than 5%; 22% of German companies, versus 18% of Italian ones, is always placed in the first quadrant, but with a growth of less than 5% (excellent enterprises); 41% of German companies, as opposed to 28% in Italy, is classified as mature companies with low profitability, but good ability to repay financial debt.

For a further demonstration of the economic and financial difficulties of the Italian companies in comparison with the German ones, it's possible to see, that the percentage of the companies at the beginning of decline and in crisis in Italy (respectively 15% and 13%) is much higher than that one recorded in Germany (respectively 6% and 4%).

In terms of profitability, it emerges that German companies, in the considered three-year period, have recorded on average a profitability higher of 1.3% in respect to the Italian ones. In particular, a big difference can be observed in the case of the companies in development, which in Italy have an average profitability equal to 13.81%, as opposed to 32.88% detected for the German companies.

The German companies show better ability to repay its financial debt in comparison with the Italian ones. Especially with a reference to the companies star, excellent and mature whose PFN/EBITDA ratio in Italy is respectively equal to 1.25, 1.31 and 2.03, meaning that they are higher than in case of the German ones (respectively 0.87, 0.46 and 1.22). As we noticed in the first quadrant, which contains the companies star and excellent, the German companies' ability to repay the financial debt is less than one year, what is appreciated by the credit system, especially the bank one.

With reference to the growth, in terms of average production value analysed within the three-year period, instead, we can affirm that the German companies are increasing on average greater than the Italian ones (0.52% of the German companies versus the negative growth of Italian ones equal to 0.20%.

The table 4 shows a comparison between Italy and Germany in terms of the main markets of trading of the debt instruments for the small and medium-sized enterprises.

Table 4 – Comparison Italy/Germany: stock markets dedicated for trading

Market previsto per le PMI	**Country**	**Year of creation**	**Number of Bond Issues**	**Source**
Entry Standard Frankfurt	Germany	2003	57	http://en.boerse-frankfurt.de/bonds/entry-standard-bonds
Mittelstandsbörse Deutschland	Germany	2011	3	http://www.boersenag.de/Mittelstandsboerse_Deutschland/Anleihen
M: access bond	Germany	2005	4	https://www.maccess.de/gelistete-unternehmen/unternehmen-anleihen
Bondm	Germany	2010	**7**	https://www.boerse-stuttgart.de/de/Bondm-Index-EUR-Index-DE000SLA0BX3-Zusammensetzung-377
ExtraMOT PRO	Italy	2013	143	http://www.borsaitaliana.it/borsa/obbligazioni/prolink/ricerca-avanzata.html?&page=8

Source: Own elaboration

According to the table presented above, Entry Standard in Frankfurt was founded in 2003 and today it accounts 57 issues; on the Mittelstandsbörse Deutschland, which was founded in 2011 are listed the financial debt instruments of only 3 companies; M: access bond was created in 2005 and on this market currently we can see a quotation of 4 financial debt instruments; Bondm, which was formed in 2010 and is managed by Boerse Stuttgart, allows the trading of financial debt instruments issued by SMEs for both, professional investors and retail public – today, the number of issues in its case is equal to 7.

5. Discussion

Empirical application of the informative matrix showed, that the degree of effectiveness of the financing instruments alternative to the debt appears influenced by the analysed space-time context.

Referring to the RQ, several differences emerged between Italian and German small and medium-sized companies, regarding the most suitable suggested financing forms.

With reference to Italy, the effectiveness of the instruments alternative to bank debt is rather modest for a number of reasons, such as:

- limited access to debt market because of strict valuation methods shared by financial investors (according to empirical analysis a small minority of the potentially interested companies meets the requirements for access to the instruments alternative to bank debt):
- lack of financial market's approval for the companies classified as not investment grade (located in the informative matrix in the following quadrants: 3rd (at the beginning of decline), 4th (in development), 5th (in crisis) and 6th (in reorganisation), with Financial debt to EBITDA ratio above 5, even with a high profitability in the 4th and 6th quadrant.
- the companies mentioned above could access this kind of debt or equity instruments, where the assessment is based not only on the historical values but especially on the estimated economic and financial results (for example hybrid debt instruments or listing at the AIM market.

With reference to Germany, it occurs the opposite scenario:

- the number of German companies that are meeting the requirements to get an access to the debt market is higher than in case of the Italian context;
- about 45% of the German companies are classified as mature companies, meaning the companies attractive for banks;
- about 76% of German companies has been classified in quadrants with high levels of profitability and low financial debt (star, excellent and mature), as opposed to 57% in Italy.

- only 25 % of the German companies analysed is classified as high risk companies. In the informative matrix they are placed in the 3rd (at the beginning of decline), 4th (in development), 5th (in crisis) and 6th (in reorganization), and their Financial debt to EBTDA ratio is above 5, even with a high profitability, in the 4th and 6th quadrant.

In addition, it emerged that:

- differences between Italian and German companies are more evident if we focus on the companies in crisis, which account 13% in Italy and 4% in Germany, with negative profitability that is equal to 8% in Italy and 6% in Germany;
- the companies in the "best" quadrants, meaning the excellent and mature companies are those that have drawn to a lesser extent on external financing, and have supported their development through a careful choice of financial independence from the third parties. It is therefore possible to say that the abundance of the credit received from the banks, especially in Italy caused a worsening of the companies' competitiveness conditions and their ability to resort to financing instruments alternative to the bank.

6. Conclusions, implications and limitations

Several differences emerged between Italian and German companies regarding the most suitable suggested financing forms. These differences are also due to the different characteristics existing between two countries:

- Germany, earlier than Italy, has provided the introduction of the markets dedicated to the debt securities of the small-medium sized enterprises, and today it is a country with the greatest number of those markets: Entry Standard Frankfurt, Mittelstandsbörse Deutschland in Hamburg-Hannover, M: access bond in Monaco of Bavaria and finally Bondm in Stuttgart. Today, the market accounts 71 issues;
- in Italy, ExtraMOT PRO segment is reserved instead to the professional investors, for the trading of bonds (including convertible bonds, whose shares arising from the conversion are traded on a regulated market), commercial paper, participating instruments and project bonds and has been activated on February 11th, 2013. The new segment was created to offer the SMEs a flexible, cheap and efficient domestic market, that size the opportunities and tax benefits arising from the new regulatory framework (Decree Law no. 83/2012). The market accounts 143 issues;
- however, in Germany the various stock exchanges have scheduled a special segment for trading the financial debt instruments of SMEs nearly a decade before Italy. The total number of issues is lower than in Italy, where the financial debts instruments for SMEs are a recent reality.

In addition, the effectiveness of the financing instruments alternative to the debt seems quite modest for several reasons, such as:

- according to the conducted analysis with reference to Italy, the companies characterized by a low ability to repay financial debt have a negative growth and a lower profitability comparing to the quadrants with a high investment grade (except of the 6th quadrant), what may means that the abundance of the credit by Italian companies in terms of growth and profitability, have caused the worsening of their economic-financial condition;
- German companies have performed much better in supporting the debt in comparison to Italian ones – 76% of them are classified in the quadrants with a good ability to repay the debts (within 5 years). In general, also in case of the German companies, by decreasing the ability to repay debt (meaning an increase of Deb. Fin/ EBITDA ratio), the growth decreases or does not assume this values to be considered in line with profitability levels achieved by them.

Even if the majority of German SMEs could be financed by recourse to the debt market, it emerged that the main markets for trading of debt securities of SMEs are characterized by a lower number of issues than the ExtraMOT Pro segment provided for the Italian Stock Exchange. It means that the German financial market (with regards to the debts) for SMEs is not a developed market; in addition, emerging differences between the German and Italian firms are due to the different cultural background of those two countries and not to the different level of the financial market's development. In fact, German companies tend to be more capitalized than Italian ones.

Generally speaking, the companies with higher growth rates and better profit performance pursue a prudent policy according to the financing sources deriving from bank. Because of that, the companies have to follow the growth path consistent with the self-financing and/ or with ability of shareholder to ensure capital resources.

The innovative financing instruments (from the point of view of risk capital and debt) have a significant role in acceleration the disengagement the companies' needs from the banking system. Nevertheless, the expected impact can not be immediate, because of the company's culture and non-perfect functioning of the capital market.

The research is characterized by series of theoretical and practical implications. With reference to the theoretical implications, the research can represent a contribution to the scientific debate, because it permits the company to know different financing methods. It can influence the process of growth and competitiveness of the companies, but can also impact on other factors such as corporate culture, the adoption of the planning and control tools and on the use of economic-financial communication instruments. With reference to the practical implications, the following results could be distinguished: for companies, greater financing opportunities enable the company to change its financial culture, decreasing predominance of the banking channel and using the alternative sources of financing; for legislature: it appears the necessity to reduce the selectivity in the process of the company's evaluation in order to create an easier access to the alternative instruments.

The research is characterized by several limitations, which nonetheless do not affect significantly the conclusions and proposed observations:

- the use of only three indicators to evaluate the economic and financial situation of the company (what is justified by a strong correlation with the economic and financial situation of the company). Nevertheless, a system of indicators would be more appropriate in increasing information about each company;
- the model is based on only quantitative variables, without considering any qualitative variables (such as investment projects, brand's originality, market share and other important variables). These variables could describe the company's business, producing some useful information in the determination of the financing sources;
- database used for consulting the financial statement of the Italian and German companies are different;
- lastly, German companies are classified within the informative matrix created for Italian companies. This fact may means that the number of German companies classified in the high risk quadrants is in a relevant way lower than the number of the Italian ones.

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