ITALIAN MUTUAL GUARANTEE INSTITUTION

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Abstract

The purpose of the present work is to carry out an analysis of the current operational context of the Mutual Guarantee Institutions (MGIs) in Italy. In this regard, econometric evaluations are performed upon balance sheet items belonging to a number of MGIs, in order to understand the main requirements for them to be granted access to public subsidies for carrying out their activities. Similarly, factors determining the amount of such subsidies are investigated as well.

As a matter of fact, the recent legal innovations related to these consortia and the new role played by the State in granting loans to companies are redefining the operational capabilities of MGIs and the support they receive by public bodies.

Specifically, such changes have brought about a significant reduction in the public funding traditionally available to MGIs, thus undermining their ability to fulfill the insolvencies related to portions of the loans upon which they had earlier placed their guarantee.

This work provides an econometric evaluation carried out upon the fully-operational MGIs in 2013: starting from Vacca, Mistrulli (2011)'s contribution regarding MGIs aggregations via public funding, issues for accessing such funding by MGIs and their corresponding amounts are discussed.

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Results of the estimations underline that the largest MGIs in 2013 are those that have greatly benefited from public funding. The remaining MGIs, in order to stay in business, face the critical challenge of either increasing their size so as to keep working with the State's support or choosing self-sustainment with the returns from the guarantee provisions.

Introduction

MGIs facilitate firms to receive loans from banks, although the literature states (Osservatorio sui Confidi, 2015) the economic balance of MGIs is assured almost all the cases thanks to public subsidies, which are provided to MGIs without a national regulatory framework concerning criteria to grant resources with the same rules on the whole country.

Starting from literature concerning the adoption proposal of these criteria (Unioncamere e Assoconfidi Luglio 2012), it has been considered whether the MGIs' dimension and the risk mitigation activities adopted by MGIs such as counter-guarantee and second-level insurance may be critical drivers in order to deliver public subsidies to MGIs.

Therefore, in the light of the above, the objective of the present analysis lies in the investigation of the main drivers underlying the release of public subsidies, by also including MGIs that had not been considered so far because the total amount of guarantees they had released was below a meaningful threshold as reported in Osservatorio sui Confidi (various yearly editions), or because the literature concerning Italian MGIs was restricted upon a sectorial (Fedart Fidi, various yearly editions) or territorial basis (Unioncamere, 2012). Specifically, in this study MGIs have been included without territorial or dimensional limitations, because according to Bartoli et al. (2013) the guarantee's value possesses an "implicit" component lying in the greater knowledge of MGIs with respect to the firm, beyond the guarantee's amount granted.

Two equations have been estimated in order to verify the MGIs′ key drivers related to their access to public subsidies and to the amount of financial support they received. In the first equation it has been estimated via an OLS model what characteristics of MGIs influence the amount of public subsidies received. The second equation has been estimated via a probit model to verify the characteristics of MGIs which may affect their chance of receiving a public subsidy. Their corresponding empirical model will be presented later in the text, whereas in the following paragraph the dataset used for the estimations will be described.

Dataset

To perform the estimations balance sheet data of MGIs have been used, which were digitalized by Cerved Group S.p.a. and provided by a bank. The dataset includes 258 balance sheets of MGIs, having December, 31st 2013 as reference date, which were actually operational in 2013.

The dataset has been obtained by filtering a larger number of observations. First of all, in the dataset balance sheets that occurred multiple times (due to updates) within the original database have been excluded (only the last updated version has been left in the dataset). In addition to this, MGIs which had undergone economic failure or were not operating anymore at December, 31st 2013 were excluded from the dataset. Finally, in order to represent data in a single dataset, data with different accounting standards were reconciled. Due to the finer-grained items features in the International Accounting Standards which highly differed from the coarser-grained items required by the Italian Civil Law standards, only the latter representation was used.
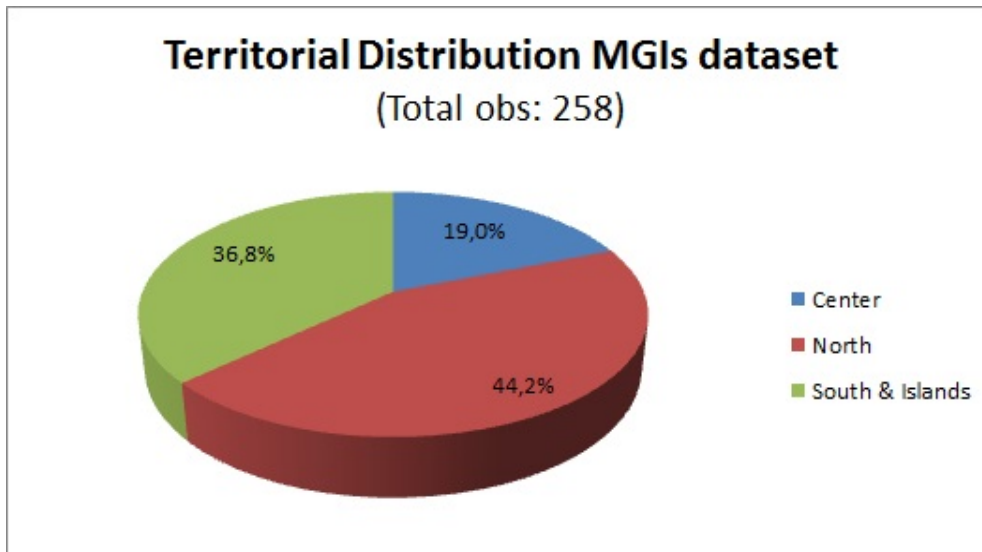
Table 1: Segmentation for geographical area concerning MGIs from the dataset (year 2013)
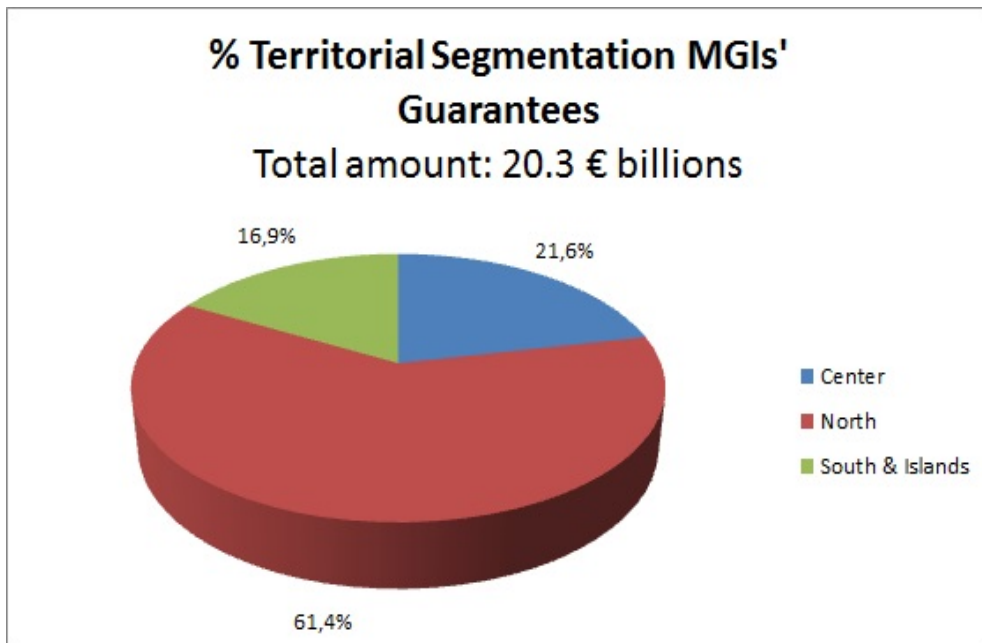Data: Cerved

Table 2: Territorial segmentation by percentage of the total amount of MGIs′ guarantees in the da-taset (2013 year)
Data: Cerved

Table 1 and 2 highlight the segmentation by geographical area of MGIs and their percentages concerning the amount of guarantees released on December, 31st 2013. Figures presented are fundamentally coherent and reliable, and aligned with the data concerning the guarantees' market of MGIs (Osservatorio sui Confidi, 2015) since they confirm the concentration of guarantees in northern Italy (Osservatorio sui Confidi, 2015). The territorial concentration of MGIs inserted in the dataset is higher in the north part of Italy than in the south, despite the fact that the literature concerning Italian guarantees' market shows the opposite. This contrast happens due to the wider availability of MGIs' data concerning northern Italy, but the dataset is suitable to the whole Italian context nevertheless, according to the decreasing trend of MGIs' guarantees highlighted in literature (Osservatorio sui Confidi, 2013): 23,9 billion euros (2010) vs 20,3 billion euros (2013).

As far as the territorial segmentation is concerned, in Table 3 some information concerning the public subsidies provided to MGIs is reported. Two figures are highlighted. The first shows that 5 Italian regions in the northern area and the Lazio region concentrate the 54,2% of MGIs that received a public subsidy, whereas the second shows the percentage of the guarantees' total amount granted to the above mentioned regions: 83,4%. The region which received the greatest amount of public subsidies is Trentino Alto Adige, while on the territory of Molise and Basilicata all of the 6 MGIs legally located in those regions did not receive any public subsidies. By comparing the total amount of figures in Table 3 with the total amount of the MGIs' public contribution during 2013 (93.680.727 €, Osservatorio Confidi 2015), it is possible to highlight that the 85% of public subsidies released in Italy during 2013 is actually featured in the database and thus their distribution is deemed reliable.

Region	MGIs number in the dataset by legal residence's region	MGIs' number in the dataset by legal residence's region which received p.subsidies	Cumulative % dataset's MGIs receiving p.subsidies	Amount p.subsidies released to MGIs' dataset	% Total contribution dataset's MGIs	Cumulative % of p.subsidies in the dataset
TRENTINO ALTO-ADIGE	5	4	3,4%	22.053.609	27,8%	27,8%
PIEMONTE	16	11	12,7%	12.284.019	15,5%	43,2%
LAZIO	23	9	20,3%	10.242.087	12,9%	56,1%
EMILIA-ROMAGNA	19	10	28,8%	7.700.791	9,7%	65,8%
LOMBARDIA	28	13	39,8%	7.380.262	9,3%	75,1%
VENETO	30	17	54,2%	6.522.522	8,2%	83,4%
SICILIA	29	10	62,7%	3.755.192	4,7%	88,1%
SARDEGNA	16	6	67,8%	3.202.499	4,0%	92,1%
ABRUZZO	19	12	78,0%	2.122.196	2,7%	94,8%
CAMPANIA	13	3	80,5%	1.075.888	1,4%	96,1%
PUGLIA	8	2	82,2%	763.267	1,0%	97,1%
UMBRIA	10	4	85,6%	698.631	0,9%	98,0%
MARCHE	12	5	89,8%	618.980	0,8%	98,8%
FRIULI-VENEZIA GIULIA	7	6	94,9%	396.714	0,5%	99,3%
CALABRIA	4	1	95,8%	232.254	0,3%	99,6%
LIGURIA	5	2	97,5%	199.310	0,3%	99,8%
VALLE D'AOSTA	4	2	99,2%	96.497	0,1%	99,9%
TOSCANA	4	1	100,0%	54.000	0,1%	100,0%
BASILICATA	2	0	100,0%	-	0,0%	100,0%
MOLISE	4	0	100,0%	-	0,0%	100,0%
TOTAL	258	118		79.398.718		

Table 3 Distribution of public subsidies by Italian regions as legal residence of MGIs (data and volumes from the 2013 dataset)
Data: Cerved

An additional data source used to build up the dataset was the MGI registry owned by a large Italian bank. This registry allowed to keep track of the age of the Italian MGIs as well as to discriminate whether they had performed a mutual merger in order to grow in size. Besides, the 2013 Italian GDP information at a regional level was obtained from the online database *I.stat.*

The variables chosen to formulate the empirical model are now described in qualitative terms; further details can be found in Annex A.

The dependent variable *Importo Contributo Ricevuto* measures the amount of public subsidies perceived by MGIs featured in the dataset during 2013.

As seen above, these subsidies are received mainly in the North Italy. The choice to include such a variable in the empirical model is meant to estimate the percentage variation of public subsidy that the MGI could receive thanks to the variation of the independent variables.

The idea is to investigate what characteristics of the MGIs can increase the amount of public subsidies received by the MGIs featured in the dataset during 2013, the year marking a decrease in public subsidies released to MGIs (Osservatorio sui Confidi, 2015).

The dependent variable *Contributo* is a dummy variable which assumes the value "1" if the corresponding MGI received a public subsidy. This variable has been inserted in a probit model meant to highlight the MGIs' characteristics which can increase the probability of receiving a public subsidy.

The variable *Structure* is a dummy variable which discriminates MGIs by their dimension. It assumes the value "1" for MGIs whose balance sheets follow the IAS classification (The International Account Standard (IAS) is a mandatory standard for MGIs whose financial assets are above a given threshold. The latter MGIs, upon an authorization issued by the Bank Italy (Banca d'Italia, 2008b), acquire the status of so-called "evolved" MGIs.), or the value "0" for smaller MGIs whose balance sheets are produced according to the Italian Civil Law standards. According to Baldinelli (2011), Vacca Mistrulli (2011), the larger MGIs are deemed more "evolved" in terms of operation, variety of services and risk management. In particular, Baldinelli (2011) and Bank of Italy (2014) express the need to boost the mergers among MGIs to constitute more stable and reliable intermediaries. Indeed, both of the authors propose to restrict public subsidies only to those MGIs that manage to acquire the sta-

tus of "evolved" MGIs: as such, the latter would be able to face the triggering of more guarantees, in connection to the financial crisis quoted in Bartoli et al. (2013). Therefore, the variable *Structure* is inserted in the model to verify if the MGIs' dimension has been for them a critical variable in order to determine the amount and the access to public subsidies in 2013.

The variable *Stock garanzie* is continuous and expresses the amount of guarantees released to MGIs and still active. It is a measure concerning the size of a MGI, the volume of its financial activities and the potential risks resulting from expected losses (Moderari, 2013). According to Osservatorio Confidi (2015), Unioncamere & Assoconfidi (2012) and Camera di commercio di Napoli (2014), it may affect the release of public subsidies to MGIs. Therefore, *Stock garanzie* is inserted in the empirical model to separate the influence of the guarantees' amount released by MGIs at 31/12/2013 from the role played by *Structure*, which tracks the information concerning the status of evolved MGIs.

The variable *Risultato* expresses the 2013 profit or loss concerning the MGIs in the dataset. It is inserted in the model according to Baldinelli (2011), highlighting the need for MGIs to operate with cheapness and a self-sustaining management thanks to their own profit. This variable is inserted in the model to verify whether profit was an element taken into account by public entities in order to release public subsidies to MGIs.

The variable *Anni* expresses how old MGIs are at the closing date of their balance sheets (December, 31st 2013), rounded down to zero decimals. It is inserted in the model to assess whether MGIs have experienced improvements in their operation thanks to the *learning by doing* described by Thompson (2010), which could improve the capacity of MGIs to present requests for public subsidies before their corresponding deadlines or to correctly submit their requests to receive a public counter-guarantee.

The variable *Fusione* is a dummy variable which expresses whether a MGI in the dataset has carried out at least one merger during its existence or not. According to Baldinelli (2011) and Banca d'Italia (2014), this variable is inserted in the dataset to evaluate if the dimensional growth of MGIs is significant to grant a public subsidy to them.

The variable *Controgaranzia* expresses whether a MGI in the dataset has activated a counter-guarantee to restrain the risk of expected losses related to the guarantees released. This variable is inserted in the model to check if the use of a counter-guarantee is taken into account by public institutions for granting the public subsidies or for determining a variation in the amount of the subsidies themselves. Concerning the twenty *regional dummies*, they assume value "1" if a MGI has the legal residence in that region; they consider local specificities as, for example, regional GDP, competition among MGIs, regional employment rate, infrastructures. The variables *Tasso conc. confidi reg.* and *Pil pro-cap. reg.* have been inserted in the model as further alternative controls for regional dummies. The first measures the degree of regional competition among MGIs in the dataset, while the second measures the GDP produced per person in 2013 in the region where the MGI has its legal residence.

						Quantiles		
Variables	Obs n.	Mean	Standard dev.	Min	1°q	Median	3°q	Max
Dependent variables								
Contributo	258	0,46	0,50	0	0	0	1	1
Importo Contributo Ricevuto*	118	671,47	1578,84	0,52	68,96	199,62	536,17	14000
Indipendeni variables								
Structure	258	0,24	0,43	0	0	0	0	1
Stock garanzie*	258	78796,14	270000,00	27,50	8282,91	25635,14	65642,12	3700000,00
Risultato*	258	-515,82	2278,53	-27048,56	0	0	7,86	2278,37
Anni	258	27,76	12,57	0	18	29	37	55
Fusione	258	0,36	0,48	0	0	0	1	1
Controgaranzia	258	0,55	0,50	0	0	1	1	1
Tasso conc. confidi reg.	258	0,07	0,03	0,01	0,05	0,07	0,11	0,12
Pil pro-cap. reg.	258	26202,87	6423,72	16078	19754	27615	31056	37044
Regional distribution of MGIs (by legal residence)								
Abruzzo	258	0,07	0,26	0	0	0	0	1
Basilicata	258	0,01	0,09	0	0	0	0	1
Calabria	258	0,02	0,12	0	0	0	0	1
Campania	258	0,05	0,22	0	0	0	0	1
Emilia Romagna	258	0,07	0,26	0	0	0	0	1
Friuli Venezia Giulia	258	0,03	0,16	0	0	0	0	1
Lazio	258	0,09	0,29	0	0	0	0	1
Liguria	258	0,02	0,14	0	0	0	0	1
Lombardia	258	0,11	0,31	0	0	0	0	1
Marche	258	0,05	0,21	0	0	0	0	1
Molise	258	0,02	0,12	0	0	0	0	1
Piemonte	258	0,06	0,24	0	0	0	0	1
Puglia	258	0,03	0,17	0	0	0	0	1
Sardegna	258	0,06	0,24	0	0	0	0	1
Sicilia	258	0,11	0,32	0	0	0	0	1
Toscana	258	0,02	0,12	0	0	0	0	1
Trentino Alto Adige	258	0,02	0,14	0	0	0	0	1
Umbria	258	0,04	0,19	0	0	0	0	1
Valle Aosta	258	0,02	0,12	0	0	0	0	1
Veneto	258	0,12	0,32	0	0	0	0	1

* thousands of euro

Note: see Annex A for exact definitions of variables

Table 4: Summary statistics

The variables inserted in the empirical model are represented in summary statistics. Table 4 shows that the mean of guarantees released is higher than the median, highlighting that the volume of guarantees is concentrated on MGIs with the larger

sizes. The variable *Structure* assumes value "1" for 24% of MGIs in the dataset, thus resulting that less than one quarter of MGIs are controlled directly by Bank of Italy as occurs for more evolved MGIs. By considering *Risultato*, it appears that these intermediaries operate on average at a loss, whereas the variable *Anni* underlines that the MGIs in the dataset are on average younger than those operating within the Italian context, where MGIs started their activity at the end of Fifties (Cacciamani, 2011); the mean is slightly lower than the median, highlighting a soft asymmetric distribution. Looking at *Controgaranzia*, it results that 55% of MGIs in the dataset protected themselves against the risks derived from issuing guarantees by underwriting counter-guarantees. The mean of *Fusione* shows that 36% of MGIs in the dataset carried out at least one merger during their existence. As for the two dependent variables, *Contributo* and *Importo Contributo Ricevuto*, 46% of MGIs in the dataset received a public subsidy during 2013 and the distribution of public subsidies provided to 118 MGIs is asymmetric. According to regional dummies, the regions with the larger number of MGIs are Lombardia, Sicilia and Veneto. Table B (Annex B) summarizes also by units the dichotomous variables highlighting the MGIs' size, public subsidies and risk management actions.

The empirical model

The model that has been designed is meant to investigate the drivers behind public subsidies provided to MGIs, both in terms of their influence on the variation of the amount of public contributions granted and in terms of the probability of MGIs to receive public subsidies.

The territorial distribution and the size class of MGIs in the dataset was earlier shown. Now, the purpose of this study is to verify, thanks to the variables described above, if and how these drivers can influence the distribution of public subsidies to MGIs. Indeed, the literature concerning MGIs (i.e. Osservatorio Confidi, Rapporto FedArt Fidi, various years) describes the conceptual frame of MGIs by introducing

the topic of their size, their presence on the market, their use of advanced methodologies to protect themselves from risks, the economic result and the region where the MGIs have their legal residence. In order to quantify the effect of these variables on the amount of public subsidies released, the following equation has been estimated:

1. *Importo Contributo Ricevuto*$_i$ = β_0 + β_1*Structure*$_i$ + β_2*Stock garanzie*$_i$ + β_3*Fusione*$_i$ + β_4*Anni*$_i$ + β_5*Controgaranzia*$_i$ + β_6*Risultato*$_i$ + γ_r + u_{ir}

where the dependent variable is the logarithm of the amount of public subsidy that every MGIs received during 2013, *Structure* is a dummy variable which assumes value "1" if the MGI has an evolved dimension, *Stock garanzie* is a continuous variable which expresses the amount of MGI's guarantees released and still operating at the end of 2013, *Fusione* is a dummy variable which assumes value "1" if the MGI performed at least one merger during its existence, *Anni* is the age of MGIs and *Controgaranzia* is a dummy variable which assumes value "1" if the MGI performed risk management activities to secure its own risks concerning the guarantees released.

Finally, the variable *Risultato* is inserted to represent profit or loss concerning MGIs, γ_r represents the twenty *regional dichotomous variables* and u_{ir} the error term. The regression is replicated by replacing the regional dummies with the variables *Pil procap. reg* and *Tasso conc. confidi reg.* as further controls. The regression has been carried out on 118 MGIs in the dataset which received a public subsidy during 2013. As an additional topic of this study, the proposal of Banca d'Italia (2014) and Baldinelli (2011) to match the supply of MGIs' public subsidies to their growth in size has been further investigated. This admissibility criteria can be inserted in the public calls published by local institutions. The following equation has been estimated in order to

verify the influence of variables to determine the probability for MGI to receive public subsidies:

2. $P(\text{Contributo} = 1 \mid Z_{ir}) = \Phi \, (C \, ' \, Z_{ir}) \, \Xi$

$\Xi \, (\beta_0 + \beta_1 Structure_i + \beta_2 Fusione_i + \beta_3 Anni_i + \beta_4 Controgaranzia_i + \beta_5 Risultato_i + \gamma_r)$

where *Contributo* is a dummy variable which assumes value "1" if the MGI receive a public subsidy. The results obtained with the regional dichotomous variables are compared with other estimations featuring the variables *Pil pro-cap. reg* and *Tasso conc. confidi reg.*, to verify the robustness of the model. As a further control for robustness, a *Linear Probability Model* with the same variables has been estimated; as known from the theory, the linear probability model (LPM) is easier to use and to understand, but is not able to catch the nonlinear nature of the true regression function of population. The probit regression considers the non-linearity of probability, but the regression's coefficients are more difficult to be interpreted.
Finally, some multicollinearity tests have been executed.

Results

The results of the equations previously described are presented in the following tables of this paragraph.
The first equation shows which variations of the independent variables express a variation concerning the amount of the public subsidies provided to MGIs. Table 5 describes how *Structure* and the other variables influence the dependent variable *Importo Contributo Ricevuto*; this variable is filled only for the MGIs in the dataset that have received public contributions during 2013 (the estimation is on 118 observations) and it represents the amount of public resources supplied to the MGIs in the dataset by public institutions.

Dependent Variable: Importo Contributo Ricevuto						OLS
	1	2	3	4	5	6
Structure						
Coefficient	0,662	0,670	0,593	1,133	1,131	0,705
Robust Std. Error	0,374	0,379	0,382	0,394	0,399	0,410
P-value	0,080	0,081	0,125	0,005	0,005	0,088
Stock Garanzie						
Coefficient	0,000004	0,000004	0,000004	0,000003	0,000003	0,000004
Robust Std. Error	0,000001	0,000001	0,000001	0,000001	0,000001	0,000001
P-value	0,000000	0,000000	0,000000	0,012000	0,010000	0,000000
Fusione						
Coefficient	0,449	0,432	0,388	0,484	0,478	0,431
Robust Std. Error	0,332	0,339	0,359	0,329	0,332	0,348
P-value	0,179	0,206	0,283	0,144	0,152	0,218
Anni						
Coefficient		-0,002	-0,002	-0,008	-0,008	-0,001
Robust Std. Error		0,011	0,011	0,011	0,011	0,011
P-value		0,824	0,878	0,478	0,477	0,915
Controgaranzia						
Coefficient			0,347	-0,135	-0,132	0,329
Robust Std. Error			0,362	0,348	0,341	0,360
P-value			0,341	0,698	0,700	0,362
Risultato						
Coefficient				0,000	0,000	0,000
Robust Std. Error				0,000	0,000	0,000
P-value				0,249	0,242	0,558
Constant						
Coefficient	5,651	5,729	5,553	4,709	4,634	5,521
Robust Std. Error	0,439	0,526	0,554	0,873	0,528	0,552
P-value	0,000	0,000	0,000	0,000	0,000	0,000
N° obs.	118	118	118	118	118	118
R^2	0,4255	0,4257	0,4317	0,2356	0,2357	0,4369
Average VIF	1,54	1,55	1,56	1,31	1,3	1,57
Stat. F	13,42	10,13	9,44	4,91	5,26	7,2
p-value (overall goodness of fit)	0,0000	0,0000	0,0000	0,0001	0,0000	0,0000
Regional Controls	YES	YES	YES	NOT	NOT	YES
Pil pro-cap.reg.	NOT	NOT	NOT	YES	NOT	NOT
Tasso conc. Confidi reg.	NOT	NOT	NOT	NOT	YES	NOT

Note:

Multicollinearity test: Variance Inflation Factor;   All estimations with robust standard errors

Table 5: Effect of the MGIs' size on the determination of the amount of public subsidies as applied on the dependent variable "Importo Contributo Ricevuto".
OLS estimation

The results of Table 5 confirm how Structure is directly correlated with the dependent variable in the columns (1, 2, 4, 5, 6); in particular, in the column (6), where both R2 and the regional controls are present with the highest values (with respect of the other columns) and the more thorough formulation of variables, it can be noticed that when the MGI's size increases from lesser to greater then the amount of public subsidy grows up to 71%. This shows that higher amounts of public subsidies are provided to MGIs if they turn into evolved MGIs.

Aside from that, the variable *Stock Garanzie* is also significant and directly correlated with *Importo Contributo Ricevuto* in the columns (1-6). On the other hand, the other variables estimated do not seem significant.

The *Variance Inflation Factor* test does not express in any columns the presence of multicollinearity among variables. The results obtained using the variables *Pil Pro-capite* and *Tasso conc. Regionale* as controls are similar to the results obtained using regional dummies.

It is possible to deduce from the results of the estimations that public institutions supplied higher amounts of subsidies to MGIs having higher volumes of guarantees, or to MGIs that assumed the status of evolved MGIs. This evidence is confirmed in the asymmetric distribution of summary statistics concerning the variable *Importo Contributo Ricevuto*. This policy adopted by public entities reveals the adoption of the guideline suggested by Banca d'Italia (2014) which was meant to restrict public subsidies only to evolved MGIs. As a matter of fact, also Baldinelli (2011) expresses the need for these Italian intermediaries to grow up by mergers or by increasing their equity, in order to grant a more efficient guarantee supply chain. To reach this goal, Baldinelli (2011) means to elicit such a growth via the restriction of public subsidies only to larger MGIs.

On the basis of the estimated results and the elements mentioned above, it is possible to assert that the public subsidies provided to Italian MGIs were used by public entities in order to elicit MGIs to grow in size, so that they might increase their capi-

tal and the controls on their business thanks to the Bank of Italy's supervision dedicated only to evolved MGIs.

In Table 6, the results of the estimations of the second equation are introduced. The purpose is to check if in the year 2013 the access to public subsidies by MGIs was influenced thanks to the variable *Structure* or other variables.

Dependent Variable: Contributo						Probit
	I	II	III	IV	V	VI
Structure						
Coefficient	0,346	0,336	0,640	0,640	0,651	0,705
Robust Std. Error	0,243	0,246	0,272	0,307	0,249	0,246
P-value	0,155	0,172	0,019	0,037	0,009	0,004
Fusione						
Coefficient	0,367	0,389	0,378	0,378	0,302	0,332
Robust Std. Error	0,197	0,202	0,201	0,315	0,188	0,187
P-value	0,062	0,054	0,060	0,231	0,109	0,076
Controgaranzia						
Coefficient	0,365	0,360	0,398	0,398	0,268	0,267
Robust Std. Error	0,197	0,198	0,200	0,194	0,172	0,173
P-value	0,064	0,069	0,047	0,040	0,120	0,121
Anni						
Coefficient		0,004	0,005	0,005	0,007	0,009
Robust Std. Error		0,007	0,007	0,008	0,007	0,007
P-value		0,530	0,476	0,512	0,302	0,189
Risultato						
Coefficient			0,000	0,000	0,000	0,000
Robust Std. Error			0,000	0,000	0,000	0,000
P-value			0,020	0,006	0,021	0,018
Constant						
Coefficient	0,106	-0,022	0,113	0,113	-1,355	-0,892
Robust Std. Error	0,364	0,422	0,436	0,277	0,392	0,305
P-value	0,771	0,958	0,796	0,684	0,001	0,003
N° obs.	252	252	252	252	258	258
Average VIF	1,68	1,66	1,68	1,68	1,22	1,21
Pseudo-R^2	0,1184	0,1195	0,1415	0,1415	0,085	0,0754
Stat. χ^2	17,9	18,37	25,55	25,55	26,88	24,7
p-value (overall goodness of fit)	0,0005	0,0010	0,0002	0,0001	0,0002	0,0004
Regional Controls	YES	YES	YES	YES	NOT	NOT
Pil pro-cap. reg.	NOT	NOT	NOT	NOT	YES	NOT
Tasso conc. confidi reg.	NOT	NOT	NOT	NOT	NOT	YES

All estimations with robust standard error except column IV with errors calculated by regional clusters

Multicollinearity test: Variance Inflation Factor

Table 6: The influence of Structure on the variable Contributo. Probit estimation

The variable *Structure* results significant and directly correlated in the complete formulation of the model, both with regional and other controls, performed in columns (IV – VI).The variable *Fusione* shows meaningful results in columns (I, II, III, VI) directly correlated to *Contributo*; compared with *Structure* results, they are significant also for incomplete formulations of the proposed model.

The values of *Controgaranzia* are significant in columns (I, II, III, IV); the coefficients are directly correlated with similar values, while the variable *Risultato* shows values significant in columns (III, IV, V, VI).

In columns (I – IV) 252 observations have been used, because regional controls exclude the six MGIs with legal residence in the two regions where public subsidies were not delivered during 2013.

Column (IV) presents standard errors calculated by regional clusters, while column (III) robust standard errors.

The VIF test does not show multicollinearity among variables, and columns (I – VI) satisfy the *goodness of fit* test.

Before introducing the quantification of marginal effects on the estimations exposed above, the same variables have been estimated also with a *Linear Probability Model* (LPM) to perform another robustness test.

Indeed, despite the limits of this model expressed above, the LPM is useful to verify the results obtained with the probit estimation.

Dependen: Variable: Contr buto						OLS
	1	2	3	4	5	6
Structure						
Coefficient	0,128	0,124	0,211	0,211	0,222	0,239
Robust Std. Error	0,091	0,093	0,094	0,113	0,085	0,085
P-value	0,164	0,185	0,026	0,076	0,010	0,005
Fusione						
Coefficient	0,126	0,133	0,124	0,124	0,107	0,118
Robust Std. Error	0,074	0,076	0,074	0,114	0,071	0,071
P-value	0,090	0,080	0,094	0,291	0,133	0,099
Controgaranzia						
Coefficient	0,124	0,121	0,131	0,131	0,098	0,099
Robust Std. Error	0,071	0,072	0,072	0,066	0,065	0,066
P-value	0,085	0,092	0,069	0,063	0,129	0,132
Anni						
Coefficient		0,001	0,001	0,001	0,002	0,003
Robust Std. Error		0,003	0,003	0,003	0,002	0,002
P-value		0,563	0,553	0,577	0,320	0,218
Risultato						
Coefficient			0,000	0,000	0,000	0,000
Robust Std. Error			0,000	0,000	0,000	0,000
P-value			0,000	0,000	0,001	0,001
Constant						
Coefficient	0,547	0,503	0,551	0,551	0,001	0,178
Robust Std. Error	0,134	0,156	0,151	0,102	0,136	0,107
P-value	0,000	0,001	0,000	0,000	0,993	0,098
N° obs.	258	258	258	258	258	258
Average VIF	1,68	1,66	1,68	1,68	1,22	1,21
Stat. F	6,12	4,75	7	8,18	6,7	6,02
P-value (overall goodness of fi:)	0,001	0,001	0,000	0,003	0,000	0,000
Regional Controls	YES	YES	YES	YES	NOT	NOT
Pil pro-cap. reg.	NOT	NOT	NOT	NOT	YES	NOT
Tasso conc. confidi reg.	NOT	NOT	NOT	NOT	NOT	YES

All estimations with robust standard error except column 4 with errors calculated by regional clusters

Multicollinearity test: Variance Inflation Factor

Table 7:The influence of Structure on the variable Contributo.OLS estimation

The LPM's results are coherent with the results of probit model. Indeed, the significance of the variable *Structure* is confirmed in columns (3, 4, 5, 6) with coefficients of the same sign in presence of different controls.

The variable *Fusione* presents meaningful results as well, with positive sign in columns (1, 2, 3, 6) as estimated previously in the probit model. Both *Controgaranzia* and *Risultato* in the OLS model further confirm the robustness of the probit model; in particular *Controgaranzia* has coefficients that are significant and positive in the OLS model for columns (1, 2, 3, 4), while *Risultato* has coefficients significant, positive and similar for columns (3, 4, 5, 6).

Also, the *goodness* of fit test shows similar values according to the probit model. The only difference between the two models is the number of observations, because in the OLS model the estimations include all the 258 observations. In fact, the 6 MGIs with legal residence in regions where public subsidies to MGIs were not delivered, which were excluded in the probit model, are instead considered in OLS model.

After the comparison between probit model and LPM, the next step of this investigation is to estimate the calculation of the marginal effects in order to quantify the influence of independent variables on the dependent variable *Contributo*. In order to perform this estimation the following formulation of the probit model has been considered, with robust standard errors and the highest value of pseudo-R^2 among all the configurations of the variables of the model.

Dependent Variable: Contributo	
	III
Structure	
Coefficient	0,640
Robust Std. Error	0,272
P-value	0,019
Fusione	
Coefficient	0,378
Robust Std. Error	0,201
P-value	0,060
Controgaranzia	
Coefficient	0,398
Robust Std. Error	0,200
P-value	0,047
Anni	
Coefficient	0,005
Robust Std. Error	0,007
P-value	0,476
Risultato	
Coefficient	0,000
Robust Std. Error	0,000
P-value	0,020
Constant	
Coefficient	0,113
Robust Std. Error	0,436
P-value	0,796

N° obs.	252
Average VIF	1,68
Pseudo-R^2	0,1415
Stat. χ^2	25,55
p-value (overall goodness of fit)	0,0002
Regional Controls	YES
Pil pro-cap. reg.	NOT
Tasso conc. confidi reg.	NOT

Robust Standard Errors

Multicollinearity test: Variance Inflation Factor

Table 8: Estimation used for the calculation of the difference quotie

	Difference quotient dy/dx
Structure	
Marginal Effects	0,216
Std. Error	0,089
P-value	0,016
Fusione	
Marginal Effects	0,127
Std. Error	0,066
P-value	0,055
Controgaranzia	
Marginal Effects	0,134
Std. Error	0,066
P-value	0,042
Risultato economico	
Marginal Effects	0,000
Std. Error	0,000
P-value	0,017
Anni	
Marginal Effects	0,002
Std. Error	0,002
P-value	0,476

N° Obs = 252

Note:
Standard errors calculated with delta method

Table 9: Results of the difference quotient of dependent variables related to independent variables

The results in Table 9 demonstrate how the difference quotient of variable *Contributo* is 22% for the independent variable *Structure* (significant at 5 %), 13% for *Fusione* (significant at 10%), 13% for *Controgaranzia* (significant at 10 %) and 0% for *Risultato* (significant at 5 %). Consequently, the variable critically influencing the delivery of public subsidy is the acquisition of the status of evolved MGI.

Similarly, *Fusione* and *Controgaranzia* contribute to increase the probability for a MGI to receive a subsidy, although with a lower marginal effect.

The variable *Risultato* instead results irrelevant to determine the access to public subsidies.

Such results imply that MGIs are stimulated to acquire the status of evolved MGIs. In fact, in order to receive the required subsidies to operate MGIs shall either increase their share capital over the dimensional threshold, or their dimension thanks to mergers among them. In addition to this, the marginal effect of *Controgaranzia* has the following implication: MGIs insuring their risks are worthier of attention from the public entities delivering the subsidies. Thanks to the risk mitigation, the bank partner of a MGI insured is bound to shelve less capital; consequently, the bank has more financial resources to support its own activities.

Furthermore, the above mentioned marginal effects confirm that public institutions adopted both guidelines proposed by Unioncamere & Assoconfidi (2012) and Baldinelli (2011); the first concerning criteria to grant public subsidies to MGIs, and the second proposing the incentive of mergers among MGIs because of the assignment of public subsidies to evolved MGIs.

The low marginal effect of *Risultato*, instead, was an expected result, because MGIs are not-for-profit entities. The implication of this result highlights that it seems not necessary for them to be for-profit entities in order to receive public subsidies from the State.

Conclusions

This study focused on the public contribution to MGIs, in order to measure the drivers influencing the delivery and the amount of public subsidies in favor of these intermediaries. Starting from the study of Vacca, Mistrulli (2011) on the topic of public subsidies as instruments to stimulate aggregations among MGIs, a dataset with data concerning a group of MGIs of 2013 was built, by reconciling the different account-

ing standards (IAS and Italian Civil Law). After this initial phase, econometric estimations were performed on such data in order to identify the drivers related to amount and access of subsidies for MGIs.

Thanks to these estimations it has been demonstrated as a first result that MGIs with an "evolved" status received subsidies with a higher amount than the same intermediaries that did not possess such a status. Consequently, this *policy* for delivering subsidies has been found coherent with the adoption of the guidelines proposed in Baldinelli (2011) and Banca d'Italia (2014).

The implications of this first result reveals a *policy* oriented to supply a greater amount of public subsidies to MGIs with a larger volume of financial activities, at the expense of MGIs less evolved that receive subsidies of lower amount. The lower support to MGIs not evolved underlines as a further implication the incentive to acquire the status of evolved MGI in order to receive more public subsidies; otherwise, these MGIs would be forced to either self-sustain themselves with profits from the delivery of guarantees or leave the market altogether.

The second results concerns the drivers for MGIs in order to access public subsidies. As a result, the main driver among the variables of the probit model was the status of evolved MGI. This was true despite the fact that both the mergers among MGIs and the risk management activities (such as counter-guarantees) have been considered worthy of attention by public entities for assigning subsidies, while the economic result of MGIs did not influence the probability to access such contributions.

Therefore, also this second result concerning the status of evolved MGI confirms that the adoption of the aforementioned policy has the following implications (as proposed by Baldinelli, 2011):

1) the creation of larger-capital MGIs is elicited by local institutions;

2) MGIs performing risk management activities are encouraged;

3) larger MGIs may operate beyond their territorial boundaries and thus favor a wider diversification of risks.

Besides, other consequences are reached thanks to the results obtained from the estimation of the marginal effect, which are coherent with the guidelines of Unioncamere & Assoconfidi (2012). In fact, it has been verified that MGIs performing mergers during their existence may later take advantage of a more favorable *policy* in order to access public subsidies. Comparing this result with the first one of probit regression, this revelation implies a further incentive for mergers among MGIs, in particular for MGIs which neither have the status of evolved MGI nor have performed any mergers. Indeed, the purpose of public entities inferred by these results highlights the *policy* to let guarantees be issued by a smaller set of MGIs, as seen in the German model showed in De Vincentiis et al. (2007) and quoting Schmidt, Van Elkan (2006), Inmit (2010).

In addition to the purpose to favor a territorial diversification as quoted in Baldinelli (2011), it also transpires the will to design financial intermediaries more capitalized on the territory.

Finally, the irrelevance of the MGIs' economic results on the delivery of public subsidies can be explained with the purpose of the cooperatives: the mutual support among their associates. It is reasonable to suppose that public entities do not evaluate the economic result of MGIs in order to deliver their subsidies; as a consequence, MGIs do not pursue profit. Furthermore, this statement is connected with the perspectives discussed above concerning MGIs of smaller sizes: if they cannot access subsidies by acquiring the status of evolved MGIs, they may be forced to operate by pursuing profits, resulting in an inconsistent behavior for such cooperatives. Therefore, MGIs with smaller sizes that are neither able to evolve nor to operate with profit will have to find other solutions to contain the risk or forced to leave the market.

Annex A: Variables, definitions and sources

Variable	Definition and sources (between brackets)
Contributo	Dummy variable, it assumes value "1" if the MGI received at least 1 € of public subsidies. Otherwise it assumes value "0" (Cerved S.p.a.)
Importo Contributo Ricevuto	Continuous variable, it indicates the amount of public subsidy MGI received from public entities in 2013. If MGI did not receive a public subsidy, the amount is zero (Cerved S.p.a.)
Structure	Dummy variable, it assumes value "1" if the balance sheet of MGI has IAS classification, otherwise it assumes value "0" (Cerved S.p.a.)
Stock garanzie	Continuous variable, it indicates the total amount of released guarantees by i-th MGI in the dataset that are still active (Cerved S.p.a.)
Risultato	Profit or loss of MGI in 2013 (Cerved S.p.a.)
Anni	Lifespan of MGIs in terms of years at 31/12/2013 (MGI registry)
Fusione	Dummy variable, it assumes value "1" if the MGI performed at least a mutual merger with another MGI during its existence, otherwise it assumes value "0" (MGI registry)
Controgaranzia	Dummy variable, it assumes value "1" if the MGI stipulated at least 1 € of counter-guarantees on the total amount of released guarantees of MGI, otherwise it assumes value "0" (Cerved S.p.a.)
Tasso conc. confidi reg.	Competition rate among MGIs in the dataset operating in the same region. It is calculated as the ratio between the number of MGIs operating in one region and the total number of MGIs in the dataset (Cerved S.p.a.)
Pil pro-cap. reg.	Continuous variable, it indicates the amount by units of the regional GDP per person in the region where the MGI has its legal residence. (I.stat)

Annex B: Summary of dummy variables, Contributo, Structure, Fusione, Controgaranzia

Contributo	MGI n.	%
NOT	140	54,26
YES	118	45,74
Totale	258	100

Structure	MGI n.	%
Not-Evolved MGI	197	76,36
Evolved MGI	61	23,64
Totale	258	100

Fusione	MGI n.	%
NOT	166	64,34
YES	92	35,66
Totale	258	100

Controgaranzia	MGI n.	%
NOT	117	45,35
YES	141	54,65
Totale	258	100

Bibliography

AA.VV. (anni vari), Rapporto FedArt Fidi

AA.VV. (2012), Anteprima Rapporto FedArt Fidi

AA.VV. (2012), Il sistema dei confidi e il ruolo delle camere di commercio nel sostegno alle imprese, Milano, Unioncamere Lombardia

AA.VV. (anni vari), Osservatorio sui confidi Camera Commercio di Torino

AECM (2007), Business profiles of Guarantee Entities and Federations Members of the AECM, Aprile

Albereto, G., Benvenuti, M., Moretti, S., Pagnini, M. e Rossi, P. (2011) The organization of lending and the use of credit scoring techniques in Italian banks. Journal of Financial Transformation 32, 143-157

Albertazzi U. e Marchetti D.J. (2010) Credit supply, flight to quality and evergreening: an analysis of bank-firm relationships after Lehman, Banca d'Italia, Temi di discussione, n.756

Baldinelli, C. (2011) "L'attuale fase di trasformazione del sistema dei confidi", Convegno: Regole, Reputazione e Mercato.Cosa cambia con la riforma del Testo Unico Bancario,Cagliari, 4 Febbraio 2011

Banca d'Italia (2006), Circ. 263/2006

Banca d'Italia (2007), Circ. 216, VII agg., Istruzioni di vigilanza per gli intermediari finanziari iscritti nell'Elenco speciale (9/07/2007)

Banca d'Italia (2008), "Computabilità di contributi pubblici nel patrimonio di vigilanza dei confidi", Provvedimento del 25/11/2008

Banca d'Italia (2008b), Circ. 216, IX agg., Istruzioni di vigilanza per gli intermediari finanziari iscritti nell'Elenco speciale (28/02/2008)

Banca d'Italia (2010), "Disposizioni di vigilanza del 18 maggio 2010. Patrimonio di vigilanza – filtri prudenziali"

Banca d'Italia (2009), "Istruzioni per la redazione dei bilanci degli Intermediari finanziari iscritti nell'Elenco Speciale", degli IMEL, delle SGR e delle SIM, 16/12/2009

Banca d'Italia (2012), "Istruzioni per la redazione dei bilanci e dei rendiconti degli Intermediari finanziari ex art. 107 del TUB, degli Istituti di pagamento, degli IMEL, delle SGR e delle SIM" del 13/03/2012

Banca d'Italia (2014), "Audizione di Banca di Italia alla Commissione Finanza e Tesoro del Senato", 16/07/2014

Banca d'Italia (2014b), "Istruzioni per la redazione dei bilanci e dei rendiconti degli Intermediari finanziari ex art. 107 del TUB, degli Istituti di pagamento, degli IMEL, delle SGR e delle SIM" del 21/01/2014

Banca d'Italia (2014c), "Istruzioni per la redazione dei bilanci e dei rendiconti degli Intermediari finanziari ex art. 107 del TUB, degli Istituti di pagamento, degli IMEL, delle SGR e delle SIM" del 22/12/2014

Bartoli et al. (2013), "Bank-firm relations and the role of Mutual Guarantee Institutions at the peak of the crisis", Journal of Financial Stability, Volume 9, Issue 1, Pages 90–104

Benmelech, E. e Dvir, E, (2011) Does short-term debt increase vulnerability to crisis? Evidence from the east asian financial crisis, NBER working paper, No.17468

Berger, A.N. e Udell G.F. (2006) A more complete conceptual framework for Sme finance, Journal of banking and finance 30, 2945-2966

Berlin, M. e Mester, L.J. (1998) On the profitability and cost of relationship lending, Journal of Banking and Finance 22, 873-97

Besanko D., Thakor A.V. (1987), "Collateral and Rationing: Sorting Equilibria in Monopolistic and Competitive Credit Markets", in International Economic Review, Vol. 28, No. 3: 671-689

Bester H. (1985), "Screening vs. Rationing in Credit Markets with Imperfect Information", in The American Economic Review, Vol. 75, No. 4: 850-855

Bolton P., Frexias X., Gambacorta L. e Mistrulli P.E. (2012) Relationship and transaction lending in a crisis, Mimeo

Bongini P., Di Battista M.L. e Nieri L. (2009) Relationship banking: una soluzione antica contro la crisi recente, Bancaria, vol. 65:5, pp.2-20

Boot, A.W.A. (2000). Relationship banking: What do we know? Journal of Financial Intermediation 9 (1), 7-25

Boot A., Tkakor A.V. (1994), "Moral Hazard and Secured Lending in an Infinitely Repeated Credit Market Game", in International Economic Review, Vol. 35, No. 4: 899-920

Busetta G. e Zazzaro A. (2012) Mutual loan-guarantee societies in monopolistic credit markets with adverse selection Journal of Financial Stability 8 15-24

Cacciamani (2011), "Evidenze e prospettive nel settore dei confidi", Monte Università Parma Editore

Camera di Commercio di Napoli (2014), "Regolamento sui contributi camerali ai Confidi operanti nella Provincia di Napoli", 4° delibera 8/5/2014, http://www.na.camcom.gov.it

Carosio, G. (2011) I confidi e il sostegno alle imprese, relazione presentata all'assemblea annuale di Federconfidi, Roma, 12 Luglio 2011

CGCT – Credit Guarantee Corporation of Tokyo (2006), Annual report 2006, marzo

Chor, D., e Manova, K. (2012) Off the cliff and back? Credit conditions and International Trade during the global financial crisis, Journal of international economics, 87 (2012) 117-133

Columba, F., Gambacorta, L. e Mistrulli, P.E. (2010) Mutual Guarantee Institutions and small business finance, Journal of Financial Stability, Volume 6, Issue 1, April.

Commissione delle Comunità Europee (2005), "Guarantees and Mutual Guarantees. BestReport". Report to the Commission by an Independent Expert Group, January

Conigliani, C., Ferri, G. e Generale, A. (1997) The impact of bank-firm relations on the propagation of monetary policy squeezes: An empirical assessment for Italy, BNL Quarterly Review 50, 271-299

Conto annuale (2013), "Rilevazione di tipo censuario sulle amministrazioni pubbliche a cura del Dipartimento della Ragioneria Generale dello Stato", www.contoannuale.tesoro.it

De Mitri S., Gobbi G. e Sette E. (2010) Relationship lending in a financial turmoil, Banca d'Italia Temi di discussione, n.772

Demma, C. (2013) L'andamento della qualità del credito e l'utilizzo di tecniche di scoring durante la crisi, Mimeo

De Vincentiis et al. (2007), I Confidi e il credito alle PMI, Bancaria Editrice

De Vincentiis, Nicolai (2010), "Il sistema dei confidi in Italia. Strategie e tendenze evolutive", Bancaria Editrice

De Vincentiis, Nicolai (2012), "I Confidi di nuova generazione. Gli impatti della crisi e le nuove regole", Bancaria Editrice

Diamond, D.W. (1984) Financial intermediation and delegated monitoring, The review of Economic studies 51 (3), 393-414

Diamond, D.W., e Rajan, R.G. (2001) Banks, short-term debt and financial crises: theory, policy implications and applications, Carnegie-Rochester Conference Series on public policy 54, 37-71

Eaton, J., Kortum, S., Neimann, B. e Romalis, J. (2011) Trade and the global recession, NBER Working Paper, No. 16666

Elsas R. (2005), "Empirical Determinants of Relationship Lending", in Journal of Financial Intermediation, Vol, 14: 32-57

European Investment Fund, Annex III to the Open Call for Expression of Interest to select Financial Intermediaries under COSME Guarantee facility, Indicative Term Sheet,http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/cosme-loan-facility-growth/

Finanziaria 2008 (legge 24/12/2007, n.244 art.1, comma 134)

Fondo di garanzia per le PMI (1996), legge 662/96, art 2 comma 100, lett. a), disposizioni operative

Fondo di garanzia per le PMI (2015), legge 662/96, art 2 comma 100, lett. a), "Report al 31/12/2015"

Elsas, R. e Krahnen, J.P. (1998) Is relationship lending special? Evidence from credit-file data in Germany, Journal of Banking and Finance 22, 1283-1316

FedartFidi (1999), "Bilancio di esercizio dei Confidi ai sensi del D.Lgs. 87/92"

Fried, J. e Howitt, P. (1980) Credit rationing and implicit contract theory, journal of Money, Credit, and banking 12 (3), 471-487

Gai (2008), "Il rating delle PMI. Un approccio metodologico per banche, confidi e intermediari finanziari", FrancoAngeli

Gambacorta L. e Mistrulli P.E. (2011) Bank heterogeneity and interest rate setting: what lessons have we learned since Lehman Brothers?, Banca d'Italia, Temi di discussione, n.829

Gilchrist S.G., Bernanke B., Gertler M., The financial accelerator and the flight to quality, Federal Reserve System, Finance and Economics Discussion Series, n.18, 1994

Guiso, L., Sapienza, P. e Zingales, L. (2004) Does local financial development matter?, Quarterly Journal of Economics 119, 929-969

Guagnini M., Mussida C. (2009) "Il rendimento dell'istruzione nelle regioni italiane." AIEL. Associazione Italiana Economisti del Lavoro, Atti XXIV National Conference of Labour Economics, University of Sassari

Herrera, A.M. e Minetti, R. (2007) Informed finance and technological change: evidence from credit relationship, Journal of Financial Economics 83, 223-269

Hoshi, T., Kashyap, A. e Scharfstein, D.S. (1990) The role of banks in reducing the cost of financial distress in Japan. Journal of Financial Economics 27 (1), 67-88

Kawai, M., Hashimoto, J. e Izumida, S. (1996) Japanese firms in financial distress and main banks: Analyses of interest-rate premia, Japan and the World Economy 8, 175-194

KPMG (2011), "Credit access guarantees: a public asset between State and Market"

Inmit (2006), "Macroeconomic benefits of German guarantee banks", The institute for small and medium enterprises of Trier university, September

Inmit (2010), "Macroeconomic benefits of German guarantee banks", The institute for small and medium enterprises of Trier university

Locatelli (2012), "Rischio patrimonio e organizzazione dei confidi", FrancoAngeli

Loraschi (2016), "Lo strumento innovativo di capitale", http://www.bankpedia.org

Moderari, 02/2013 Newsletter - La gestione delle perdite attese e delle perdite inattese per gli intermediari bancari e finanziari

Panetta F. e Angelini P. (a cura di) (2009) Financial sector pro-cyclicality: Lessons from the crisis. Banca d'Italia, Banca d'Italia, Questioni di economia e finanza (Occasional Papers), n.44

Remondi R. (2014), "Il ruolo delle garanzie confidi: tendenze in atto tra crisi e segnali di ripartenza", Rivista Minerva Bancaria N.3-4/2014

Sharpe S. A. (1990), "Asymmetric Information, Bank Lending and Implicit Contracts: A Stylized Model of Customer Relationships", in The Journal of Finance, Vol. 45, No. 4: 1069-1087

Shim (2006), "Corporate credit guarantees in Asia", in BIS Quarterly review, dicembre

Schmidt, Van Elkan (2006), The Macroeconomic benefit of German guarantee bank, Institute for small and medium size enterprise, University of Trier

Stock, Watson (2009) "Introduzione all'econometria", 3° edizione, Pearson

Thompson P. (2010), "Learning by Doing", Handbook of The Economics of Innovation, Vol. 1 pag. 429–476

Tsukahara (2006), "SME financing in Japan", dicembre

Uesugi, Sakai (2005), "The special credit guarantee program in Japan", Working paper, settembre

UniCredit (anni vari), Rapporto UniCredit sulle piccole imprese

Unioncamere, "Monitoraggio dell'attività dei confidi e delle misure di sostegno attuate dal sistema camerale", Rapporto 2011

Unioncamere, "Monitoraggio dell'attività dei confidi e delle misure di sostegno attuate dal sistema camerale", Rapporto 2012

Unioncamere e Assoconfidi Luglio 2012, "Linee guida per agevolare la concessione di credito in favore delle micro, piccole e medie imprese", http://www.unioncamere.gov.it/P42A2220C308S0/Linee-Guida-Unioncamere-Assoconfidi-luglio-2012.htm

Unioncamere Lombardia (2012), "Il sistema dei confidi lombardi e il ruolo delle camere di commercio nel sostegno alle imprese", Rapporto 2012

Vacca, Mistrulli (2011), "I confidi ed il credito alle PMI", Quaderni di economia e finanza N.105, Banca d'Italia

Vescina, Quaglia et al. (2015),"L'accountability dei confidi", Studiare Sviluppo Srl

UCLA (2016), Statistical Consulting Group. Regression Diagnostics: http://www.ats.ucla.edu/stat/stata/webbooks/reg/chapter2/statareg2.htm (accesso del 04/01/2016)

Williams (2015), "Problems with the Linear Probability Model (LPM)", University of Notre Dame, http://www3.nd.edu/~rwilliam/