Does Recent Regulation Improve (or not) the Spanish Mutual Guarantee System?

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ABSTRACT

This paper aims to analyse the new regulation framework and its impact on the Spanish mutual guarantee system (MGS), especially on the cost of the guarantee. The main conclusions are that the reforms which were introduced do not directly affect the reduction of this guarantee cost. Nevertheless, in our opinion, the regulation has strengthened the mutual guarantee system during the crisis as a result of the banks generating confidence to this financial intermediary, which helps to correct credit market failures. Currently, banks are more likely to recognize the role of the mutual guatentee society (MGS) and the declining risk involved thanks to the guarantee offered by the MGS that exhibits stronger solvency, liquidity and good governance policies.

Keywords: Small Business Regulation, Mutual Guarantee System, Guarantee Cost
JEL Classifications: D82, G21, G30

1. INTRODUCTION

Lack of availability and access to adequate financial resources has come to be one of the recurring obstacles to expansion, business growth and survival of enterprises. The high structural bank debt of small and medium-sized enterprises (SMEs) worsens in situations of negative economic imbalance. The financial crisis in the euro area has led to the fragility that has been a characteristic of business financing in recent years, especially in the Southern European, including Spain.

The gross and net rates, which are annual indicators of opening and closing rates, have been confirming these affirmations for more than two decades. According to the OECD (2015), young firms do not survive their first 5 years of life. During the most critical period of the crisis in Spain, from 2008 to 2013, the number of company closures grew continuously at a higher rate than the creation of new firms.

Furthermore, Spanish SMEs are highly dependent on bank financing among the EU countries. 78% of these firms are financed by bank debt, while in the UK, bank debt represents only 30%,

France 45%, Germany 55% and Italy 70%. Only 30% of SMEs in the US are financed by bank debt (Spanish Stock Exchange Commission, 2014).

Given the Spanish SMEs' excessive dependency on banks, legislator has intended to improve the financial situation of firms. In the context of economic and financial recovery, the Spanish government published, among others[1], two relevant laws from the point of view of small business finance. With the enactment of Act 14/2013 (27 September), Support to Entrepreneurs and their Internationalization, and Act 5/2015 (27 April), promotion of corporate financing, the government has made advances with respect to bank financing initiatives. With the enactment of the first law, the government has made progress with respect to bank financing initiatives. The dual purpose of the latter is, on the one hand, to confer accessibility, flexibility and power to corporate finance and banking and, on the other hand, to make progress in strengthening extra-banking alternative financing. Both laws are

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1   Among these others measures we can find: Act 1/1994: Regulation of Mutual Guarantee Societies. Act 10/2014: Ordination, Supervision, and Solvency of Financial Entities. Act 31/2014: Improvement of Corporate Governance. Royal Decree 85/2015: Development of Solvency Act.

in line with the principles of Small Business Act for Europe (SBA) 2008 (revised in 2011).

It is well known that small businesses have difficulties in accessing the credit markets due to asymmetric information and to the fact that banks can overcome this conflicting information by improving the lending relationship or asking firms for guarantees. Financial entities reject credit before taking on a high credit risk when the borrower is inexperienced or newly created (they do not have enough financial background), innovative and very small. However, SMEs can improve their access to the credit market and loan conditions (interest rate, maturity, amount, etc.) by joining a Mutual Guarantee Society (MGS) (Columba et al., 2010). According to Busetta and Zazzaro (2012), "the basic intuition is that the motivation for MGSs lies in the inefficiencies created by adverse selection, when borrowers do not have enough wealth to satisfy collateral requirements and induce self-selecting contracts."

The MGS acts as a financial intermediary which operates as a guarantor and is responsible to the lender (bank) in case the borrower (small business) defaults. The guarantor takes on part (or all) of the credit risk, thus allowing access to credit and improving conditions of the loan agreement. According to Gozzi and Schmukler (2015) and Beck et al. (2010), different models exist: (i) Public systems operated by government initiatives at local, regional, or national levels (although publicly funded, they may be managed by private groups); and (ii) corporate associations that are usually funded and operated by the private sector. In developing countries, the MGS is almost always public, whereas in developed countries, the MGS receives partial government support.

After this introduction, the paper is organised as follows: Section two presents the MGS landscape in Europe and Spain and prior research. Section 3 presents major changes introduced by recent regulation in Spain. Section 4 focuses on assessing the cost of the MGS' guarantees and, finally, Section 5 presents a summary, main conclusions and further research.

2. MUTUAL GUARANTEE SYSTEM LANDSCAPE IN EUROPE AND SPAIN. PRIOR RESEARCH

The MGS exists in many countries and has become more widespread over recent years due to the effects of the crisis both in developing countries (Latin-America and Asia) and developed countries (Beck et al., 2010; Green, 2003). There are 36 MGSs in the 28 countries that composed the European Union and 5 MGSs in others European countries[2] (Table 1). According to the European Association of Guarantee Institutions (AECM), almost 12% of SMEs were beneficiaries in portfolios at 31/12/2015; Italian SMEs being the largest in the group of SMEs, followed by French (35.3%).

Figure 1 shows us the relationship among the volume of outstanding guarantees in portfolios of AECM members as well

as the gross domestic product (GDP) of each country at market prices, according to the last data published in 2013. As we can see in the table, Italy, Portugal, Hungary and France are the most active countries in terms of guarantee schemes and the added value of the economy (Figueiredo, 2015).

The main debate about this financial intermediary is to assess the impact of this guarantee on the availability of credit and its cost, as well as its impact on the firm's performance. For example, there are some relevant studies that were carried out on the Italian market. Zecchini and Ventura (2009) found that firms with the guarantee of an MGS have more availability to credit than those which do not have this guarantee. Furthermore, Columba, et al. (2010) found that small firms in the Italian market from MGS pay less interest rates on loans compared to those who are not affiliated to an MGS. D'Ignazio and Menon (2013) found that a regional credit guarantee policy in Italy was effective in improving financial conditions for the beneficiary firms. Targeted firms benefitted from a substantial decrease in interest rates. These authors, however, did not find a significant effect on real performance (that is, the firm's investments). Calcagnini et al. (2014) showed that collateral guarantees systematically reduce the interest rate of secured loans, while personal guarantees show no systematic effect on interest rates, but do favour the firms' access to credit. Other examples outside Europe are Castillo-Bonilla and Girón (2014) who found that the National Guarantee Funds increase the availability of credit to Colombian SMEs. Oh et al. (2009) evaluated the effect of Korean credit guarantee policy in terms of growth of productivity, sales, employment, investment, R & D, wage level of the supported firms and their survival rates. They found that the guarantee provision helped firms with this support to increase (or maintain) their size in terms of sales and employment, as well as making it easier for them to hire more skilled employees (or, at least, it helped to promote employee welfare). Credit guarantees did not help firms increase their R & D and investments and hence, growth in productivity[3].

Spanish legislator understands that the MGS is a financial intermediary that helps small businesses, entrepreneurship, and freelance workers to have access to the credit market, solving asymmetric information, as well as improving the credit conditions for the firms and their employment levels, which can have an important social impact.

According to the Annual Report (2015) of the Spanish Mutual Guarantee Societies Confederation (CESGAR), small businesses that are beneficiaries of an MGS guarantee have the following characteristics: They are basically micro-enterprises (54%); they

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2   25 European countries (21 UE-28 countries) and 42 members belong to the AECM.

3   Asdrubali and Signori (2015) analyse the impact of SME beneficiaries on their performance. They use information from SME beneficiaries basically from the Orbis database from 2005 to 2012. The authors analyse the effect of having received a guaranteed loan on firm performance (employment, production, profitability and factor productivity) against a control group of comparable firms. They find that the EU Guarantee System had, on average, a significant positive effect on firms' employment: beneficiary firms were able to increase their workforce by 17.3%, compared to the control groups, within the first 5 years following the issuance of the guaranteed loan. Moreover, by the fifth year after the signature date, the turnover of beneficiaries had increased by 19.6%, compared to non-beneficiary firms.

Table 1: Mutual guarantee system in European countries

EU-28 countries	Year of creation	Number of SMEs in UE countries with MGS*	AECM members per country**	Number of SME beneficiaries in the portfolio**	Percent of total SMEs
Austria	1954 and 1969	307,486	2	4446	1.45
Belgium	1999, 2002 and 2004	564,874	3	7735	1.37
Bulgaria	2008	311,983	1	1458	0.47
Croatia	1994	148,127	1	1480	1.00
Czech Republic	1992	1,006,434	1	6159	0.61
Estonia	2001	527,990	1	989	0.19
France	1966, 1969 and 2012	2,888,419	3	594,006	20.57
Germany	1990	2,178,788	1	45,955	2.11
Greece	2003	725,854	1	9170	1.26
Hungary	1991, 1992 and NA	505,664	3	37,581	7.43
Italy	NA and 2001	3,825,458	2	1,348,767	35,26
Latvia	2015	91,755	1	574	0,63
Lithuania	2001	141,609	2	2,991	2,11
Luxembourg	1969	29,265	1	50	0,17
Netherlands	2014	860,972	1	16,163	1,88
Poland	1924	1,516,864	1	111,196	7,33
Portugal	1974 and 1994	792,442	2	49,393	6,23
Romania	1994, 1993, 2001 and 2009	433,988	4	11,638	2,68
Slovenia	1992, 1995, NA and NA	119,405	3	1,652	1,38
Spain	1980	2,382,692	1	118,879	4,99
United Kingdom	1981	1,698,451	1	11,915	0,70
Total: EU-28 countries		21,058,520	36	2,382,197	11.3
Others European countries	Year of creation	Number of SMEs in others European countries with MGS*	AECM members per country**	Number of SMEs beneficiaries in the portfolio**	Percentage of total SMEs
Bosnia and Herzegovina	2010	:	1	:	:
Russia[a]	2006	4,531,000	1	975	0.02
Serbia	2003	280,000	1	612	0.22
Turkey[b]	1970 and 1993	2,695,131	2	375,910	13.95
Totals others European countries		7,506,131	5	377,497	5.0

Source: Authors' findings from *EUROSTAT; **AECM (31/12/2015); [a]Russian SME Research Centre (1-1-2015) and [b]Turkish Statistical Institute. (:) - Missing data, NA: Not available, SME: Small and medium-sized enterprises, AECM: European Association of Guarantee Institutions

Figure 1: Volume of oustanding guarantees (in portfolio) scaled by gross domestic product at market price (values in %) - 2013
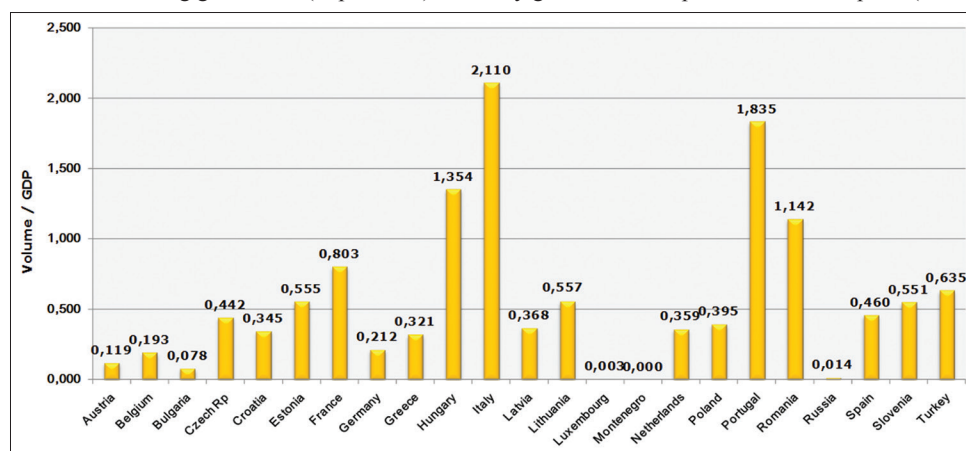
Source: Figueiredo (2015). Gross domestic product figures are from Eurostat. Latest update 30/05/2014

belong to the tertiary sector, including commerce (62%); they apply the guaranties for investment operations (54%), and the period of the guarantee is generally more than 3 years (91%). SMEs could supply personal and mortgage guarantees to the MGS.

Table 2 shows the evolution of the Spanish mutual guarantee system in 1994 (the same year the law was enacted), 2008 (the year when the financial crisis began), 2014 (the year of the beginning of economic recovery) and 2015 (the last available year).

Table 2: Evolution of the Spanish mutual guarantee system

Main figures	1994[a]	2008[b]	2014[c]	2015[d]
Numbers of affiliated SMEs	43,751	94,522	116,223	118,879
Percentage of SME benefitting from the system	2.1	2.7	3.7	5.0
Formalized guarantees (thousands of Euros)	1950	2,238,000	901,721	974,407
Creation of employment	NA	694,160	646,681	647,141
Distribution of the guarantee by sector (in percentages)				
Industrial	38	24	25	23
Primary	5	3	4	4
Services (including commerce)	44	58	59	62
Construction	13	15	12	11
Beneficiary institutions (in percentages)				
Saving banks	32	40	NA	NA
Publics banks and others	14	20	NA	NA
Private banks	47	11	NA	NA
Others institutions	7	29	NA	NA
Objectives of the guarantee (in percentages)				
Investments	NA	59	49	54
Cash flows	NA	0	14	25
Technical guarantees	14	20	16	5
Financial guarantees	86	17	19	14
Others	NA	4	2	2
Period of the guarantee (in percentages)				
<12 months	8	3	2	2
From 12 to 36 months	13	5	6	7
More than 36 months	79	90	92	91

Source: Authors' findings from CESGAR Annuals Reports. [a]Act 1/1994, main MGS Reform, [b]Year of the beginning of the financial crisis, [c]Year of the beginning of the economic recovery, [d]Last available year. NA: Not available, SME: Small and medium-sized enterprise

In Spain, Camino and Cardone (1999) assessed the cost of guarantees on Spanish small business without taking into account the effects of public subsidies and the social benefits of the cost of the guarantee[4]. The impact of government subsidies and social benefits are not always perceived clearly, exacerbating the binomial cost-benefit evaluation, which is why it is so difficult to evaluate this cost (Gozzi and Schmukler, 2015). García-Tabuenca and Crespo-Espert (2010) and Briozzo and Cardone-Riportella (2016) have analysed the impacts of two financial aid programmes, the subsidy credit of the Official Credit Institute (ICO) SME line and the impact of the Spanish guarantee system provided by an MGS. Cardone-Riportella, et al. (2013) analysed the impact of the Basel Accords (Basel II and III) on bank capital requirements for SMEs when the internal ratings-based approach is used. Miñarro-Gómez et al. (2016) analysed the effect of a guarantee received from a Spanish MSG on the cost and availability of credit for SMEs. There is no study which analyses the impact of the MGS' regulatory framework on small business finance and its impact on the Spanish MGS. The main objective of the paper we are currently presenting is to analyse the impact of the recent regulatory framework on financing SMEs under the Spanish MGS.

3. STRENGTHENING THE SPANISH MUTUAL GUARANTEE SYSTEM

In Spain, the MGSs have been regulated by a comprehensive and sometimes complex legal framework. The MGS adopts a hybrid type of society inspired by French regulation. On the one hand, it is a corporation like a private corporation and, on the other hand, it is a mutual company. The sector is highly concentrated.

3.1. Act 14/2013: Minimum Capital Requirements and MGS Own Resources

To boost the development of the MGS, these financial intermediaries need to have sufficient resources of their own to meet minimum solvency requirements, as established by Act 1/1994 on the legal regime of the MGS. In order to strengthen them, so-called "protecting partners" may exist. The Spanish system is supported by the public administration at different levels: (i) A national level (Ministry of Industry, Energy, and Tourism), (ii) a regional one (Autonomous Communities' Administration), (iii) or among trade associations, chambers of commerce and financial institutions (banks and lending institutions or saving banks). All of these support the system as "protector partnerships." The existence of such partners is possible in theory, but in practice, they are essential to the survival of the MGS since such partners help to reach minimum capital requirements. These funds also strengthen the solvency of the MGS because, as part of its equity, they do not integrate the amount of share capital.

In order to boost the liquidity, solvency and legal minimum capital required, Act 14/2013 increased the minimum capital regulated by Act 1/1994 by more than 5 times, placing the current amount required at €10M. Accounting aggregates, like financial statements, include not only the equity capital but also the reserves, which are taken into account by the third parties to assess the solvency of the MGS. Therefore, Act 14/2013 also established €15M as the minimum amount for its own resources. This measure intends to

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4   The guarantees offered by an MGS are costly as behind them the government grants subsidies to support young unemployed people and SMEs are always present (Honohan, 2010).

boost the capacity of the MGS to provide more financial support to guaranteed transactions.

It was hoped that these measures that forced the increase in both the minimum capital requirements and own resources would primarily affect the 13 smaller MGSs (measured by level of outstanding risk). The MGS could be adapted through structural modifications, such as mergers (which was probably the legislator's intention) (García-Mandaloniz, 2015). If this adaptation had not happened, then it would have become an undesired destabilised guarantee model with direct damage to their main target, the SMEs. After the adjustment period, it was observed that of the 23 MGSs that existed in 2013 (21 of them belonged to autonomous regions and 2 of them were national), there are currently 19 MGSs (18 belonging to Autonomous Communities and one MGS has national and sectarian activities)[5].

It can be concluded that with these measures the regulation is affecting the MGS sector, but does not directly affect the cost of the guarantee.

3.2. Act 5/2015: MGS Topics

Act 5/2015 has modified articles 10, 11, and 43 of Act 1/1994. The preamble of this law specifically announces three measures of a very different character which affect the following topics: (i) Charges and administrative cost; (ii) Counter- guarantees; and (iii) corporate governance.

The first measure directly affects the cost of the guarantee, even if the impact is not significant. The second measure affects the operational mechanics of the counter-guarantee which directly benefits the MGS. Finally, the third measure affects the sector as a whole. The establishment of corporate government rules improves the image of the financial intermediary not only for the potential partners of the MGS, but also for financial institutions.

3.2.1. Charges and administrative costs

Act 5/2015 adds a new paragraph which admits that a "maximum mortgage" may be constituted in favour of the MGS. It is not necessary to formalize a mortgage for each operation. Thus, notary and registration expenses can be reduced, which adds tax savings on tax stamp duty by not having to provide multiple mortgages, but only one mortgage.

While the cost of the guarantee for this item may be reduced, there are other more relevant concepts for this expense which are not regulated by Act 5/2015. According to the Spanish Counter-Guarantee Company (CERSA), these costs are divided into refundable (share capital to obtain the status of a participating member and refundable when the debt is cancelled) and non-refundable amounts: The commission to study the operation risk,

which is proportional to the amount of the guarantee, as well as the commission on the balance that is pending amortization. When an SME presents an MGS guarantee, the cost does not always benefit from a reduction in the interest rate applied by the financial institution.

3.2.2. Counter-guarantee

The guarantees issued by the MGS covers from 70% to 100% of the bank loan, depending on whether the guarantee is personal or is a mortgage. The MGS takes on 25% of the formalized guarantee and the remainder (up to a maximum of 75%[6]) is counter-guaranteed by CERSA. This is understandable because it is a guarantee that is jointly and severally liable where the counter-guarantor (CERSA) directly takes on part of the risk. This is an automatic counter-guarantee. Prior to Act 5/2015, there were other rules that applied with a subsidiary counter-guarantee, that is, a second-degree guarantee. Before 2015, the guarantee took effect before the MGS resources were exhausted (discounting the share capital and the legal reserve).

In order to increase the performance capacity of Act 1/1994, Act 5/2015 developed the basis for a counter-guarantee model through CERSA, similar to those existing in other EU countries and with the participation of the Public Administration. Promoting sustainability of the system necessarily involves increasing the solvency of the counter-guarantee system. In the past, it was supported by the former SME Business Development Initiative Project, which took on up to 5% of the outstanding counter-guarantee risk at the time of the application. This was done in order to reduce the cost of operations that were counter-guaranteed both jointly and severally. Once this initiative was completed, it was backed by the former Spanish Ministry of Science and Technology for the guarantees of business projects with more advanced technological developments. Later, in 2012-2013 the national resource contributions by the Ministry of Industry, the Directorate General of State Assets, and the Spanish ICO had to be reinforced as community contributions by the European Investment Fund by extending an agreement in December 2012 that was effective until December 2015.

Although the MGS has a solvency ratio higher than 12% and will not be expected to be necessary when resorting to counter-guarantees, the section focussing on counter-guarantees introduced by Act 5/2015 is an improvement in the activation of the counter-guarantee process awarded by CERSA. Traditionally the main only objective of CERSA has been to directly ensure the MGS, which in turn guarantees SMEs. However, under the assumption of possible bankruptcy proceeding of the MGS, the Bank of Spain launched the proposal of direct contacts between the financial institution and CERSA in October 2013. The spirit of the proposal was to strengthen the guarantee mechanism in order to develop their full potential so that SMEs can have more assiduous access to credit from banks, which tend to reject the application on the grounds that there is an insufficient contribution guarantee. This proposal was finally embodied in Act 5/2015. The counter-guarantee is activated at the first lawsuit that breaches the MGS under the terms

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5   In the last few years, there have been two mergers in the Spanish MGS sector. The two regional MGSs belonging to the Canary Islands have merged (SGR SOGARTE, in Tenerife and SOGAPYME, SGR in Las Palmas), and have constituted a new MGS, called AVAL Canarias. Two regional MGSs belonging to Basque Country (ELKARGI and OINARRI) also have merged. Similarly, two MGSs at the national and sectarian level (Transaval and Bonds and Financial Services) have disappeared. CESGAR: http://www.cesgar.es/ (05-10-2016).

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6   The higher percentages are for: Innovation and Development of Operations (75%), Entrepreneurship and Microfinance (70%).

defined in the counter-guarantee contracts. That means that the counter-guarantee is activated when the loan is in default and not when it has failed. CERSA will be directly responsible at the mere breach of the guarantor when the guarantee is executed inside the contractually defined terms.

3.2.3. Corporate governance

The suitability of the regime of corporate governance of directors and executives of financial institutions has been extended to the MGS. Act 5/2015 applies the same criteria of respectability, knowledge and own experience to managers as to credit institutions.

Spanish legislators, in line with the EU, have incorporated rules to improve good governance in Act 10/2014 of the Ordination, Supervision and Solvency of Financial Institutions, and in Act 31/2014 (amending the Royal Legislative Decree 1/2010) of the Companies Capital Act to improve Corporate Governance. This new regulation now legally includes requirements of knowledge, experience and business reputation for managers and members of the board of directors of the MGS in order to avoid abuse of power and prevent a conflict of interest and lack of diligence. The MGS has not had the legal recognition of a credit institution, but it has been classified as a financial institution supervised by the Bank of Spain. Therefore, Act 5/2015 has chosen to incorporate specific rules in this area for the MGS, while indicating that "suitability assessment shall comply with the criteria and control procedures, reputation, experience and good government generally established for credit institutions." However, a general reference to the regulation of the adequacy and corporate governance contained in Act 10/2014 would have been enough, as Act 5/2015 for financial institutions has been regulated[7] (García-Mandaloniz, 2015).

4. APPROACH FOR ASSESSENT OF THE MGS GUARANTEE

The study of the impact of the financial support and the cost of the guarantee received by an SME by an MGS guarantee has been limited partly due to unavailable data. Under this scenario, the cost of the guarantee can only be assessed through a simulation using average data.

The assessment of the cost of the guarantee, without taking into account the social benefits, is the sum of the following two groups of costs: (i) Refundable contributions and (ii) non-refundable contributions. The Spanish system does not provide for the collection of public subsidies (counter-guarantees). The MGS pays for this counter-guarantee, but it is not transferred to the SME. At the same time, there is generally no cost for the cancellation of operations in advance.

Simultaneously, we can calculate the cost of the guarantee as the difference between the internal rate of returns (IRR) of both cash flows of the operation with a guarantee (Formula 1) and without a guarantee (Formula 2) (Cardone-Riportella, et al., 2013).

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[7] The purpose of Act 5/2015 that regulates credit finance companies is to provide rules of corporate governance, which is included in Act 10/2014.

The IRR of the cash flows when the SMEs present a guarantee to the banks equal to:

$$0=GA-(CMGS+SC)\times GA-CPB_1-\frac{CPB_2+Q}{(1+IRR)}$$

$$-...-\frac{CPB_n+Q}{(1+IRR)^{n-1}}+\frac{CMGS+Q}{(1+IRR)^n} \tag{1}$$

Where:

Guaranteed amount:	GA
Amount of the bank quota (French system):	Q
Subscription quota to the MGS capital:	CMGS
Commission for study:	SC
Commission on pending balance at the end of period t:	CPB
Guaranteed period:	n.

The IRR of the cash flows when the SME does not present a guarantee to the bank is equal to:

$$0=LA-(SC)\times LA-\frac{Q}{(1+IRR)}-...-\frac{Q}{(1+IRR)^{n-1}}+\frac{Q}{(1+IRR)^n} \tag{2}$$

Where:

Loan amount:	LA
Amount of the bank quota (French system):	Q
Commission for study:	SC
Guaranteed period:	n.

Table 3 shows the minimum and maximum percentages applied by the MGS in 2015, according to CESGAR. It can be observed that there is a large spread between them, which basically depends on the following factors:
- Type of guarantee offered by the firm (personal or mortgage);
- Type of guarantee offered by the MGS (financial or technical);
- Target funding requested;
- Guarantee requested;
- Term of the loan.

The MGS agrees with the bank that the interest rate to be applied should take these factors into account. With the following information, we will calculate the cost of the operation with and without a guarantee.

Guaranteed Amount:	€50,000
Subscription quota of the MGS capital:	1%
Commission for study:	0.75%
Commission on pending balance at the end of period t:	1.25%
Interest rate applied by the bank:	2.5%
Guaranteed period:	7 years
Type of guarantee offered to MGS by the SME:	Personal.

The interest rate that the firm finally pays for the operation guaranteed by a MGS is 4.6% (after considering the 0.5% commission paid for the study). If the bank applies an annual interest rate of 4.5%, the final interest rate that the firm pays is 4.6% (after considering the 0.5% commission paid for the study) which means that the cost of the guarantee is 0%. However, when the bank applies 4%, the final interest rate that the firm pays is

4.1% (after considering the 0.5% commission paid for the study), which means that the cost of the guarantee is 0.5% (Table 4).

Currently, and since interest rates have been lowered, banks are more likely to sign agreements with an MGS. By doing that, both have relevant benefits, for an important groups of firms in the Spanish economy (e.g. the entrepreneurs, freelance workers and micro-firms) while having access to the credit market in specials credits conditions for interest rates, maturity, amounts, etc. For banks, they increase their business line while decrease their risks.

Another more sophisticated approach for the assessment of the guarantee is application of the "option pricing theory" (Black and Scholes, 1973). Authors like Merton (1977), Selby et al. (1988), among others, applied this theory to evaluate the price of the MGS guarantee. When a bank receives an MGS guarantee, it acquires the right to sell the default to the MGS (guarantor) and to recover the loan's principal and interest pending to be paid by the SME. This works as a put option. It is a European option which implies that the right to sell the debt exists up to the maturity of the loan. The cash flows of the guaranteed loan are the underline asset of the call option. If the loan is repayable by instalments (as it usually is) the theoretical framework "can be similarly replicated by a number of options that are a function of the repayment structure of the loan" (Pizzutilo and Calò, 2015).

5. SUMMARY, MAIN CONCLUSIONS AND FURTHER RESEARCH

Although economic recovery began in 2014 with GDP growth and the increase of flow credits, there is still an important group of SMEs which has difficulties accessing the credit market. These firms are mainly entrepreneurs, freelance workers and micro-firms which are currently the main beneficiaries of the Spanish mutual guarantee system.

In the context of the financial crisis and the beginning of the economic and financial recovery period, the Spanish government published two relevant laws about small business finance: (i) Act 14/2013, Support to entrepreneurs and their Internationalization; and (ii) Act 5/2015 of the promotion of corporate financing.

Act 14/2013 increased the minimum capital regulated by Act 1/1994, raising it more than 5 times, now requiring the current €10M; and raising the minimum amount for own resources to €15M. The purpose was intended to boost the capacity of the MGS with a view to providing more financial support to guaranteed transactions. It was expected that these measures would primarily affect the smaller MGS (rated by the level of Outstanding Risk). After the adjustment period, it can be noted that, out of the 23 MGSs existing in 2013, 19 currently remain. This leads us to think that the rule was effective enough to homogenise a highly heterogeneous sector. It can be concluded that the regulation is affecting the MGS sector structure, as the police makers had thought.

Act 5/2015 addresses three measures of a very different character: The charges and administrative costs, counter-guarantees and corporate governance. The first measure directly affects the cost of mortgage guarantees. A new paragraph, which admits that a "maximum mortgage" may be constituted in favour of the MGS, has been added. With the inclusion of the maximum mortgage, costs have been reduced as it is no longer needed to have a mortgage for each operation (e.g. it represents a fixed cost equal to €70 for each operation). With this measure there is a saving of notary and registration fees, which add tax savings on tax stamp duty by not having to provide multiple mortgages. However, the reduction has a very small financial impact on the cost of the guarantee. The second measure affects the operational mechanics of the counter-guarantee. This measure directly benefits the MGS' liquidity because the counter-guarantee is activated when the loan is in default no when it has failed. As for the activation

Table 3: Contributions to obtain an MGS guarantee

Non-refundable contributions	
Pending Balance Commission (CPB). Annual guarantee fee in proportion to the balance pending amortization	
Financial guarantee (to financial entities and others)	From 0.50% to 1.50%
Technical guarantee (public sector and others)	From 0.25% to 1.50%
Commission for study to analyses the operation risk (SC)	
This amount must be paid whether the credit is granted or not	
Financial guarantee (to financial entities and others) (depending on the credit's maturity date)	From 0.50% to 0.75%
Technical guarantee (public sector and others)	From 0.25% to 0.75%
Refundable contribution	
Share capital to obtain the status of a "participating member" (CMGS):	
Financial guarantee (to financial entities and others)	From 1.25% to 4%
Technical guarantee (public sector and others)	From 1.00% to 2%

Source: CESGAR (2015)

Table 4: Cost of the mgs guarantee in percentage

Final interest rate paid by the SMEs when accessing the credit market with an MGS guarantee (%)	Interest rate applied by the bank when the SMEs access the credit market without an MGS guarantee (%)	Final interest rate paid by the SMEs when accessing the credit market without an MGS guarantee (%)	Cost of the MGS guarantee (%)
4.6	4.5	4.6	0
4.6	4.0	4.1	0.5

of the first requirement on facing the breach of the guarantee system, the standard has a positive aspect (i.e., accelerating its recovery by financial entities). Nevertheless, it was stated that the fact that the standard should not precisely specify the causes that would boost reactivation means that the re-guarantee may be called up unnecessarily under certain circumstances. Finally, the third measure affects the sector as a whole. The establishment of corporate government rules improves the image of the financial intermediary not only for the potential partners of the MGS, but also for the credit institutions.

The main conclusions are that the legal reforms that were introduced do not directly affect the reduction of the cost of the guarantee. However, in our opinion, the regulation has strengthened the mutual guarantee system during the crisis period by generating the banks' confidence for this financial intermediary, which has helped to correct credit market failures. Banks are more likely to recognize the role of the MGS and the reduced amount of risk involved thanks to the guarantee offered by an MGS which exhibits stronger solvency, liquidity and applies good governance policies. The MGS exhibits an average solvency ratio around 14.78% (according to the Basel Accords it must be 8%) and historical default rates are at 4.35% (CERSA website).

Under this regulation framework, financial institutions are more inclined to negotiate agreements when there is an MGS, which include, among other things: Interest rates applied to SMEs; commissions; maximum amount per guaranteed loan, and characteristics of the payment in case of enforcement of the guarantee. These agreements improve the credit conditions of the small business and mitigate the asymmetric information.

It is relevant to remark at this point that the function of the MGS is to act as a financial intermediary and to facilitate the credit operation with the bank when the SME presents a higher risk to a financial institution. It also has the ability to share risks in credit operations when high amounts are at stake. Sometimes, the small business assumes the cost of the guarantee, knowing that it will not be offset by lowering the interest rate. Therefore, only the presentation of a guarantee allows SMEs access to the credit market.

But, the reforms introduced by the Spanish legislator through the mentioned measures are still insufficient to effectively support SMEs, not only to finance their working capital (it has been observed that the main beneficiaries are micro-enterprises that basically finance working capital), but also to support their debt and growth. To this end, the legislator should have analysed the barriers that prevent it (government bureaucracy, tax regulations, etc.).

A further research line may be to improve the method to evaluate the cost of the guarantee applying the option-price model (Black and Scholes, 1973). Other future efforts could explore the performance of SME beneficiaries of the Spanish mutual guarantee system before and after an MGS guarantee was granted. This analysis could take into account the different financial systems of the Spanish Autonomous Communities.

6. ACKNOWLEDGMENTS

7. FUNDING

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