

Chapter 3

Thematic Focus: Credit Guarantee Schemes

This chapter provides an overview of Credit Guarantee Schemes in Scoreboard countries. The evidence on public schemes provided in the country profiles is complemented by information on private guarantee schemes as well as mixed guarantee schemes (public-private). The chapter sets this evidence within a conceptual framework, discussing the rationale of credit guarantee systems and illustrating the diversity of CGSs, in terms of ownership structure, funding, programme design and operational characteristics. It explores these dimensions in specific credit guarantee schemes in Scoreboard countries and reviews the main policy measures introduced during the crisis to support credit guarantee operations. The chapter then addresses structural and emerging challenges for the effectiveness and sustainability of these schemes. For this purpose, key dimensions for evaluation and performance indicators are examined. The chapter concludes with policy considerations.

1. Introduction

In the aftermath of the 2008-2009 global financial crisis, in many countries, Credit Guarantee Schemes (CGSs) have represented an instrument of choice for policy makers to improve access to finance by SMEs and young firms. This business segment has faced more severe credit conditions in relation to large firms, in the form of increased requests for collateral, shortened maturities and higher interest rate spreads. This suggests that smaller firms were considered to be higher-risk companies by lenders and that the financing gap has become a concern for a greater number of entrepreneurs.

The evidence from the Scoreboard shows that governments responded to increasing difficulties faced by SMEs in credit markets by injecting capital into their loan guarantee programmes and direct lending programmes. Over 2008-2010, new guarantee programmes were set up, and existing loan guarantee programmes ramped up, as part of government anti-crisis packages. In the light of the uncertain recovery, in 2011, many of these programmes were continued or, as part of policies intended to stimulate growth and job creation, some new elements were introduced, tailored at specific categories of SMEs.

The expansion of public guarantee instruments, as well as the increased support to private guarantee schemes, through funding or co-guarantees, has triggered greater demand for monitoring and evaluation. This demand concerns in particular the effectiveness and sustainability of credit guarantee policies in stormy fiscal times. At the same time, there is a need to distinguish the specific challenges arising from the extensive use of credit guarantees as a countercyclical tool from their ordinary functioning as a structural element of financial systems.

Indeed, CGSs are a long-established risk transfer mechanism to ease access to finance for firms and entrepreneurs constrained by information asymmetry, limited credit history and under collateralisation, which, in many countries, have existed since the beginning of the 20th century (Beck et al., 2010). Undoubtedly, their diffusion and relevance have increased significantly over the last several decades, across OECD and non-OECD countries alike. If in OECD countries their late expansion is largely related to the increasing difficulties for SMEs in accessing debt finance, in several non-OECD countries, CGSs have also developed rapidly as a mechanism to expand credit markets and improve financial inclusion.

2. The rationale for Credit Guarantee Schemes

CGSs are used widely across economies as important tools to ease financial constraints for SMEs and start-ups. These firms are typically limited in their capacity to access credit because of under-collateralisation, limited credit history and, often, lack of expertise needed to produce sophisticated financial statements. Because of the information asymmetry that exists between the firm and the potential lender, this latter attributes a high risk of default to the borrower. In the absence of adequate collateral, this eventually results in a partial or negative response to the credit demand. The credit guarantee mechanism is a risk transfer mechanism commonly used to overcome these constraints. The loan guarantee implies that, should the SME default, the CGS will reimburse a pre-defined share of the outstanding

loan.¹ In other terms, by reducing the financial loss suffered by the financial institution in the case of default, CGSs reduce the lender's credit risk.

At the theoretical level, there is some divergence of views as to whether government policies should be designed to plug alleged SME financing gaps, in which some SMEs and entrepreneurs that have the capability to use funds productively were they available, do not have access to those funds (Cressy, 2002; OECD, 2006). The conceptual debate has focused on the *excess demand* versus the *credit rationing* hypotheses. According to the first (e.g. De Meza and Webb, 1987), there exists such a gap if interest rates are below the equilibrium, market-clearing rate, as a result of intervention by authorities, which leads to excess demand for loanable funds. The seminal work by Stiglitz and Weiss (1981), on the other hand, underlines the existence of failures in financial markets, due to asymmetric information and agency problems. In particular, banks have difficulties distinguishing good risks from bad risks and in monitoring borrowers once funds have been advanced. They will hesitate to use interest rate changes to compensate for risk, in the belief that, by driving out lower-risk borrowers, high interest rates may lead to a riskier loan portfolio, thus setting in motion a process of adverse credit selection. Therefore, they have an incentive to engage in credit rationing and to allocate credit by quota. In this way, they do not provide or extend the full amount of credit demanded even when the borrower is willing to pay higher rates. In the Stiglitz-Weiss formulation, credit rationing is said to occur if i) among loan applicants who appear to be identical some receive credit while others do not; or ii) there are identifiable groups in the population that are unable to obtain credit at any price (OECD, 2006).

Although the credit rationing argument applies to businesses in general, SMEs are particularly affected because the problem of information asymmetry is more acute in their case. In fact, most of them are unlisted and are not required to disclose financial information. The broad range of SMEs' productivity and survival rates also contributes to the credit rationing by financial institutions. The asymmetric information often leads to situations in which lending is not based on expected return but rather upon access to collateral, which may reduce or eliminate contract problems such as "moral hazard" and "adverse selection", limiting the downside loss for the lender (Berger and Udell, 1990). However, using collateral increases the cost of borrowing, because transferring control of the collateralised assets often involves legal and other administrative costs. Also, the collateral may be worth more to the borrower than to the lender, whose incentive to sell the assets as quickly as possible may result in under-pricing (Leitner, 2006). In addition, the use of collateral may impose opportunity costs on borrowers, affect business performance and increase the risk of default, to the extent that it ties up assets that might be put to more productive uses (Berger et al., 2011).

Credit guarantee mechanisms are intended to address this market failure, by reducing the financial loss suffered by the financial institutions in the case of defaults. Furthermore, in the case of individual assessment of loans (i.e. *retail* credit guarantee systems), participation in a CGS can improve the relationship between borrowers and lenders, to the extent that it represents an *ex ante* positive signal to the bank on the creditworthiness of the firm. This can favour the development of a longer-term trust-based relationship, in which the incidence of information asymmetries is reduced (Honohan, 2010). CGSs can also work to improve the efficiency of local financial markets. To the extent that the lender's financing activities is limited to local firms only or to firms that operate in a narrow set of sectors, CGSs provide a way to spread risk. This happens if the scheme supports firms from several regions or different sectors.

3. Typologies and operational characteristics of Credit Guarantee Schemes

There exists a wide variety of designs and types of CGSs, within and across countries. In principle, across all types of schemes, relevant players in the guarantee mechanism include the SME that demands credit, the financial institution that performs an assessment of the borrower's creditworthiness, the CGS that covers a share of the loan with its guarantee, and the government.

The government plays an important role in its function as regulator of financial markets, but can also play a direct role in the guarantee schemes, by providing financial support, participating in their management, or, indirectly, by granting counter-guarantees, whereby the government takes over the risk from the guarantor, up to a pre-defined share of the guarantee.

The actual engagement and role of the different players depend on the legal and regulatory framework, which reflects both international standards and country-level policy objectives, but also on the operational features of the individual scheme. The following paragraphs illustrate this diversity drawing on evidence from *Scoreboard* countries.

3.1. Ownership and management

Depending on the ownership structure and role of shareholders in the management of the scheme, CGSs can be classified into three main typologies: i) Public Guarantee Schemes; ii) Public-Private (or mixed) Guarantee Schemes; iii) Private Schemes. However, even within a given typology, these forms may be very different from country to country, responding to specific market needs and legal and economic framework conditions.

Public schemes

Public Guarantee Schemes (PGSs) are founded on government initiative as a direct policy tool to alleviate financial distress by SMEs. They are generally managed by government related agencies, such as public guarantee banks, or by an administrative unit of a ministry. In some cases, the guarantee schemes are operated through agencies with participation by the private sectors.

Examples of public schemes operated by public agencies include: the Canada Small Business Financing Program (CSBF), a loan loss-sharing programme for government and private sector lenders, managed by Industry Canada, the government's department with responsibility for regional economic development, investment, R&D and innovation; Chile's *Fondo de Garantía para Pequeños Empresarios* (FOGAPE), managed by BancoEstado, the state-owned bank; Denmark's *Vækstfonden* (Growth Fund), a government investment fund which provides guarantees to established growth companies, as well as get started loans and equity funding; the Slovak Republic's SME guarantee programmes managed by the Slovak Guarantee Development Bank, owned by the Ministry of Finance; the government-owned Slovene Enterprise Fund; and the US Small Business Administration's (SBA) 7a Loan Program (Box 3.1).

In some countries, particularly those characterised by a strong federal model, public guarantee funds are articulated as a network of local or regional funds, overseen by a central institution. In Russia, the Programme of Guarantee Fund Creation and Development, set up in 2006 by the Ministry of Economic Development, is co-funded by the federal and regional governments. To operate this Fund, 83 organisations have been created in 79 regions. The capital contributions may vary across regions, but the federal level provides at least 50% of the capital.

Box 3.1. Credit Guarantee Schemes in the United States: The 7(a) loan program

Several credit guarantee programs are in place in the US, the most important being the 7(a) Loan Program. The program is operated by the Small Business Administration (SBA), a government agency, and started operation as early as 1953, the year of foundation of the SBA.

Size threshold determining eligibility of the program varies by industry affiliation. For manufacturing, firms must have less than 500 employees. For other sectors, the threshold is defined in terms of turnover. Guaranteed loans are allowed to finance various business purposes, including working capital, investment in fixed assets and lands, and – under special conditions – debt refinancing. Importantly, to be eligible borrowers have to certify that they were unable to obtain credits on the regular financial market.

The coverage ratio depends on the loan volume. In the case of small loans (under USD 150 000), 85% are guaranteed compared to 75% of larger loans. The maximum amount of loan is USD 2 million. Maturity depends on the use of the loan. For working capital, the threshold is 10 years as compared to 25 years in the case of fixed assets. The program also specifies a maximum interest rate, which is pegged to the prime (up to 2.75% above the prime) and decreases with the volume of the loan and its maturity. To mitigate the adverse effects of the financial crisis for access to finance of small firms, within the framework of the Small Business Jobs Act of 2010, the maximum amount of loan volume was increased to USD 5 million.

Guarantee fees are expressed as a percentage of the guarantee and are generally paid by the borrower. They consist of an upfront fee and an annual fee. The latter is fixed at 0.54%, while the former increases with the loan volume the maturity of the loan. The maximum upfront fee is 3.7% (for guarantees exceeding 1 million USD and a maturity larger than 1 year).

Source: US Small Business Administration, Quick Reference to SBA Loan Guarantee Programs; OECD (2012).

Guarantee services may also be provided by public entities in a decentralised manner, through the financial system, with little or no direction in how the guarantee scheme is run. For instance, in the case of the United Kingdom's Enterprise Finance Guarantee (EFG), created in 2009 as a counter-cyclical instrument, lending is all held in individual lenders' loan books. Capital for Enterprise Limited (CfEL), a private company entirely owned by the UK government, is responsible for oversight of the scheme; i.e. collecting premiums from borrowers, making payments to lenders to cover defaults, monitoring lending flows and providing audit capability in general. The delivery of the scheme, including the decision to offer an EFG loan or not, is fully delegated to the lender and the central government does not interfere in the operation of CfEL.

In the Netherlands, a full partnership principle is applied by BBMKB (Besluit Borgstelling MKB Kredieten), the debt guarantee instrument of Agentschap NL, an agency of the Ministry of Economic Affairs, Agriculture and Innovation. Through this scheme, the government allocates, out of a given total annual budget, guarantee envelopes to partner banks. Banks supply the guarantee on their own credits without an individual decision made by the fund, that is, decision-making is delegated to banks.

Public-private Guarantee Schemes

Public financial institutions, development banks or SME agencies often play a catalytic role in the establishment of public-private guarantee schemes, in which the public entity may keep a majority stake. For instance, in Hungary, Garantiqa Hitelgarancia, the main

guarantee institution in the country, was founded in 1992 by the Hungarian government – which holds the majority share through the Hungarian Development Bank Group – large commercial banks, co-operative savings associations and some enterprise interest group associations, all of which are minority shareholders. In Turkey, the Kredi Garanti Fonu (KGF) is held in equal shares by KOSGEB (Turkey's SMEs Development and Support Organisation), TOBB (The Union of Chambers and Commodity Exchanges of Turkey), entrepreneurial associations and banks. KGF also benefits from counter-guarantees provided by the Turkish Treasury.

In France, a large guarantee programme is managed by OSEO, a development agency owned 90% by the state and 10% by private banks and other institutions. OSEO is headed by a public-sector holding company and reports to both the Ministry for the Economy, Finance and Industry, and the Ministry for Higher Education and Research. At the operational level, however, it is characterised by a large degree of management autonomy.

In the cases of public or mixed schemes, public authorities provide funds for CGSs. However, their direct involvement in the management, credit risk assessment and loss recovery is less common, as these functions are mostly frequently carried out by the lending institutions.

Private Guarantee Schemes: The case of Mutual Guarantee Schemes

Private guarantee schemes are characterised by the direct participation of the private sector, SME organisations and banks in the funding and management of the scheme. The role of the government is generally limited to the regulatory and legal framework and to the provision of financial assistance, which comes either in the form of direct funding or counter-guarantees.

Among the oldest existing schemes are mutual guarantee schemes (MGSs), which are private societies created by borrowers in order to improve their access to finance, predominantly found in European and South American countries. MGSs are characterised by strong ties with the local community and territorial system and, often, member firms operate in a specific sector or value chain. This provides a specific information advantage to the schemes, which are in fact commonly active in credit risk assessment: they evaluate their members, assess their creditworthiness, express recommendations to lending institutions and are involved in the recovery of losses should the borrower default.

The peer review process acts as powerful mechanism for controlling risk and limiting opportunistic behaviour. Since the MGS suffers a loss in case of default, members have strong incentives to closely monitor their peers, which may prevent borrowers from excessively risky behaviour and increase the repayment probability of the loan.

MGSs can be classified into institutions with direct and indirect mutuality. In the case of direct mutuality, the schemes are capitalised by the contribution of member firms, which take on joint responsibility for outstanding credits and are directly involved in the management. In order to be eligible for support, firms generally have to be members of the institution.

In countries with well-established mutual schemes, a multi-layer guarantee structure is commonly observed or is emerging in response to changes in the regulatory and competitive environment, with local schemes that benefit from close proximity to firms and local financial institutions, larger regional schemes that provide co- and counter-guarantees to the first-tier schemes, and the government, which plays a key role as

guarantor of last resort, through a central guarantee fund. This is the case of Italy, where a large number of MGSs (*Confidi*) operate at the local level, typically in industrial areas that are characterised by clustering of highly specialised and interconnected SMEs and a well-defined territorial economic identity, related to a sector or value chain (Box 3.2).

Box 3.2. Mutual Guarantee Schemes in Italy (*Confidi*)

Italian mutual guarantee schemes (*Confidi*) are among the most important schemes in Europe. Almost 1 million Italian SMEs are members of a MGS and guarantees granted by Italian MGSs account for 41 % of all guarantees issued by European CGSs and 1.4 % of Italian GDP. The coverage ratio typically amounts to 50% of the loan volume.

The first Italian mutual guarantee scheme was created spontaneously by entrepreneurs in the late 1950s as a mean to increase their bargaining power vis-à-vis banks and to improve their access to finance. Despite a profound process of reorganisation and mergers over the last 50 years, *Confidi* have maintained their mutuality character, that is, entrepreneurs are both members and shareholders of the institutions and are often heavily involved in their management. The mutuality character is codified into law as at least 20% of their capital endowment must come from affiliated firms.

The Italian system is characterised by a great variety of mutual schemes, which differ with regard to the territorial coverage and industry affiliation of their member firms. More than 200 institutions exist which are grouped into 7 aggregate national Italian Federations, according to their sector of operation. These federations provide the link between the guarantee institutions themselves and the business associations which promote them. The system works in fact as a two layer system and generally at two interrelated territorial levels. The first level is the local one, which allows for strong ties to the territory and to affiliated SMEs. At this level, credit risk assessment is performed, benefiting from the specific knowledge of local members. The second, higher level generally operates with a regional scope and provides counter-guarantees to the local level. These are second-tier MGSs, which are set up by groups of the same institutions. By providing counter-guarantees they allow for a broader sharing of risk across schemes. At the same higher level, counter-guarantees are also offered by entities funded by the regional government. However, banks can by-pass this second level and apply for direct guarantee from a state supported guaranteed fund, such as the Central Guarantee Fund. This latter provides direct guarantees to banks and acts as a guarantor of last resort for the MGSs, to the benefit of SMEs with less than 250 employees.

From 2000-2007, the Fund provided EUR 4.2 billion in guarantees for EUR 8.7 billion worth of loans. In response to the financial crisis, the Italian Government has re-financed the Fund, in order to expand its credit guarantee operations. As a result, in 2009 the Fund guaranteed an amount of credit worth EUR 4.9 billion. Furthermore, the maximum guarantee per firm was increased from EUR 0.5 million to EUR 1.5 million and the eligibility of the previously excluded crafts enterprises was introduced. Throughout 2010-2011, the CGF showed an unprecedented growth and counter-guarantee operations increased at a higher rate than direct guarantees. In 2011, a further EUR 8.4 billion in guarantee loans was supported. *Confidi* were also supported by local Chambers of Commerce, which provided direct funds as well as counter-guarantees.

Source: De Vincentiis (2008); Zecchini and Ventura (2009); Mistrulli et al. (2011); Locatelli (2012).

Regional and sectoral specialisation are also a feature of the Spanish model of mutual schemes (*Sociedades de Garantía Recíproca* – SGR). Three MGSs, specialised by industry (Leisure, Transport, Audio-visual), operate at the national level. At the regional level there

exist 20 schemes, promoted by public agencies, financial institutions, co-operatives, associations, chambers of commerce and SMEs. Also the Spanish model is characterised by a system of public counter-guarantees, which operates through a state-owned reinsurance company, CERSA (*Compañía Española de Reafianzamiento, S.A.*).

Another example of direct mutualism can be observed in Turkey. The system is divided into three levels: 910 co-operatives at the local level, 32 regional unions and one national umbrella organisation, TESKOMB (the Union of Credit and Guarantee Cooperatives for Tradesmen and Craftsmen), created in 1970. In this case, the shareholders and beneficiaries are the co-operatives. With the guarantee from the co-operative, a member can access credit at lower interest rates from Halk Bank, the Turkish state-owned bank. The difference between the interest rate applied to the loan and the commercial rate is compensated by the State (AECM, 2012a; KPMG, 2012).

In most cases, mutual guarantee systems are the result of bottom-up initiatives. An exception can be found in Portugal, where a mutual guarantee system was initiated in 1992 by IAPMEI, the Portuguese public agency that supports SMEs. With the aim to set basic framework conditions and demonstrate to the private sector the potential of mutual guarantee mechanisms, a pilot society was created, SPGM Sociedade de Investimento S.A., which built guarantee operations and other services aimed at SMEs. Entrepreneurs and SME associations were gradually engaged and, over time, the operational functions of the public pilot entity were transferred to newly created MGSs. Nowadays, SPGM acts as the holding company of the system, offering a range of non-operational services and managing the publicly funded Mutual Counterguarantee Fund (FCGM), which covers part of the risk of the MGSs and can counterguarantee itself with the European Union's "SME Guarantee Facility", managed on behalf of the European Commission by the European Investment Fund, under the EU Competitiveness and Innovation Framework Programme (CIP).²

In schemes with indirect mutuality the involvement of firms in the scheme's management is less pronounced than in the case of direct mutual schemes. Typically, the institution is managed by a chamber of commerce or a trade association of which firms are members. Examples include: in France, SIAGI (*Société de caution mutuelle de l'artisanat et des activités de proximité*), created in 1966 by the Chambres des Métiers et de l'Artisanat and later participated also by banks; in Chile, the first mutual guarantee scheme, PROAVAL, created in 2008 by a group of professionals, companies and business associations, following the law enacted in June 2007, which introduced the possibility to establish MGSs.

3.2. Legal and regulatory framework

Credit Guarantee Schemes are typically not-for-profit organisations to which specific regulatory systems apply (Leone and Vento, 2012). Although the composition of own funds and management may vary significantly from country to country, as financial intermediaries, CGSs are subject to the control of the prudential supervisory authority. The way the norms of prudential supervision applicable to banks impact the guarantee institutions depends on whether they are qualified as supervised financial intermediaries. If this is the case, these norms directly influence their *modus operandi*. Otherwise, the influence of the norms is indirect, as they affect the technical characteristics of the guarantees issued by the scheme. It should also be noted that some public CGSs, which act on behalf of their ministries, are not subject to requirements on capital and solvency ratio (i.e. Basel III rules), since the funding comes directly out of public budgets and does not figure on their books as own funds.

Control over CGSs can be exercised at various levels, including by public bodies and the Central Bank. The supervision and control of public schemes is generally performed by central government ministries or, if the organisation has the status of financial intermediary, as in the case of France's OSEO, by the Central Bank. For instance, in Korea, KODIT (Korea Credit Guarantee Fund), as a government sponsored organisation, is monitored and assessed by related government departments: the Ministry of Strategy and Finance (Budget Planning), the Financial Services Commission (Operation Supervision) and the Small and Medium Business Administration (Capital Contribution).

The control function can also be delegated to *ad hoc* control structures, supervised by the Central Bank. This is the case, for instance, of MGSs in Italy, which can be classified into supervised schemes (under the direct supervision of the Bank of Italy) and the smaller unsupervised schemes (under inspection of an external body, also subject to the Bank of Italy's supervision). These supervised and non-supervised schemes co-exist and compete in the same markets.

In some countries, a special tax regime is in place to favour the credit guarantee activity. The guarantors may be exempt from the payment of taxes, which enables them to fully reinvest the surplus earned from the activity. This is the case of Spain, where MGSs are exempt from taxes on public subsidies and the returns gained from their investment, which are allocated to a Technical Reserve Fund, intended to increase their solvency (Pia, 2008).

3.3. Operational characteristics

Types of services

CGSs often combine their main service – the provision of a partial credit guarantee on a bank loan or loan portfolio – with the offer of complementary services to SMEs, such as information on financial markets, assistance in the preparation of accounting statements and training programmes. Training programmes are more frequent in the case of public schemes, whereas, in most cases, MGSs are dedicated exclusively to the guarantee activity. Furthermore, public schemes often combine their main guarantee services with a range of other financing support instruments, including risk capital, mezzanine capital, and support for internationalisation.

Export credit guarantees are used widely to ensure exporters against the risk of foreign customers' defaults. In Finland, for instance, Finnvera, the state-owned enterprise that provides financial services to start-ups and SMEs, issues export credit guarantees that cover commercial and political risks. In Chile, CORFO, the government economic development agency, provides guarantees for export and – since 2011 – for import.

Firm eligibility

CGSs differ according to the firms that are eligible for guarantees. In most cases, guarantees are issued only to firms below a given size threshold, as defined in terms of either sales or number of employees, although this threshold may then vary by sector, as in the case of the SBA 7a Loan Program in the United States (see Box 3.1). Eligibility may also differ with respect to the activity for which finance is provided. For example, the Canada Small Business Financing Program (CSBFP) does not grant guarantees for loans intended to finance working capital needs. This was also the case of Chile's FOGAIN, a guarantee fund for investment loans managed by CORFO, until 2001, when it was extended to working capital needs.

In some cases, in order to be eligible, firms have to prove that they have been denied finance on the market due to a lack of collateral. This requirement exists for the US SBA 7a Loan Program and for KGF in Turkey.

As a policy instrument, PGs may also be directed at specific categories of firms, such as start-ups or innovative firms, in accordance with broader policy objectives. This is the case of KIBO (Korea Technology Finance Corporation), a guarantee institution funded by Korea's central government and banks, which guarantees up to 100% of the loan for companies that invest in technology (Box 3.3).

Box 3.3. Korea Technology Finance Corporation (KIBO)

In 1989, the Korean Government funded KOTEC (Korea Technology Credit Guarantee Fund), as a non-profit guarantee institution under the special enactment "Financial Assistance to New Technology Businesses Act". The mission of KOTEC was to contribute to the national economy by providing credit guarantees to facilitate financing for new technology-based enterprises while promoting the growth of technologically strong SMEs and venture businesses. In 2002, the founding Act went through a full-scale revision and was newly titled "Korea Technology Finance Corporation Act". The fund changed its name to Korea Technology Finance Corporation (KIBO).

Since it was founded, the Fund has provided more than USD 167 billion (KRW 183 trillion) worth of guarantees to SMEs that possess prominent technology and business prospects but lack security for financing. In particular, more than 80% of the total guarantee amount was provided to companies that intended to develop or apply new technologies via the Technology Credit Guarantee System. Under this program, a small technology-based company that cannot meet a bank's lending criteria (which usually imply provision of collateral) applies for a technology guarantee. KIBO investigates and evaluates the creditworthiness and the value of the technology of the company. In most cases, the banks rely on the investigation and the approval by KIBO for their decision of the loan extension. Besides guarantee provision, KIBO handles defaults and claims.

KIBO also provides technology appraisals and technological and management-support. The appraisal services include: i) technology value appraisal, which estimates the monetary value of the current or prospective technology; ii) feasibility assessment of technology business, which evaluates the feasibility of commercialising a current or prospective technology or of expanding a technology investment; iii) comprehensive technology appraisal, which evaluates the monetary value of all the technologies of the enterprise, taking into account current and expected business framework conditions.

Source: KIBO (<http://eng.kibo.or.kr/>); Hong (2006); KPMG (2012).

Guarantee assignment process

Three broad types of schemes exist which regulate the relationship between CGs, banks and SMEs and establish the tasks undertaken by the scheme: *retail*, *portfolio* and *wholesale* guarantee systems.

In *retail guarantee systems*, CGs typically examine the eligibility of firms, assess credit risk on a case by case basis, and decide whether the guarantee will be granted. In some cases, credit risk assessment is done by both the CGS and the lender. As illustrated in Table 3.1 for a sample of guarantee schemes in Europe, retail-type guarantees are common, especially among mutual schemes, whose competitive advantage builds on in-depth knowledge about borrowers. The knowledge advantage can compensate for the burden

Table 3.1. Selected Credit Guarantee Schemes: Operational characteristics

	Credit Guarantee Scheme	Ownership	Restricted to SMEs	Retail vs. portfolio			Credit risk assessment		Guarantee limit	Guarantee period		Coverage ratio (in %)		
				Retail	Portfolio	Combination	Guarantee scheme	Lending institution		Max.	Average	Min.	Max.	Average
Czech Republic	CMZRB	Public		x			x		15	7.0	n.a.	n.a.	n.a.	
France	SOCAMA	Mutual	x	x			x	EUR 200 000	7 ¹	n.a.	100	100	100	
France	OSEO	Public-Private	x	x ²			x ³	EUR 1.5 million	15	6.0	20	80	48	
Hungary	Garantiqa	Public-Private	x				x	HUF 2.5 billion	25	2.0	n.d.	80	65	
Hungary	AVHGA	Mutual	x	x			x	HUF 1 billion	25	3.7	n.a.	n.a.	61.6	
Italy	Federconfidi-Confindustria	Mutual	x	x			x	EUR 2 million	15	1.5	n.a.	n.a.	50	
Italy	Federasconfidi-Confcommercio	Mutual	x	x			x	n.a.	> 5	1.5	n.a.	n.a.	50	
Italy	SFGA-ISMEA	Public	x	x			x	EUR 2 million	n.d.	12.0	30	80	62	
Netherlands	Agentschap NL	Public				x	x	EUR 1 million ⁴	12	n.a.	n.a.	n.a.	45	
Portugal	SPGM/SCM	Mutual ⁵	x			x	x	EUR 1.5 million ⁶	n.s.	4.0	n.a.	n.a.	10-100	
Russian Federation	FSECA	Public	x	x			x	RUB 70 million	n.d.	1.8	n.d.	70	48.8	
Slovenia	SEF	Public	x	x			x	EUR 1.2 million	10	7.0	60	80	n.a.	
Spain	SGR/CEGAR	Mutual	x	x			x	legal limit 20% of own funds	15	8.0	n.a.	80	n.a.	
Turkey	KGF	Public-Private	x	x			x	TRY 1 million	8	3.0	n.a.	n.a.	73	

Notes: n.a.: not available, n.d.: not defined, n.s.: not specified.

1. In some cases for commercial real estate financing the maximum period extends to 15 years.

2. Portfolio approach only for small guarantee commitments.

3. Business organisations and other private agencies are also involved in credit risk assessment. In special cases, OSEO performs its own risk assessment to provide a second opinion on the bank's risk evaluation.

4. For BMKB scheme.

5. Founded by a public entity.

6. For certain credit lines the maximum guarantee is EUR 2.5 million.

7. Depending on guarantee type.

Source: European Association of Mutual Guarantee Societies (AECM).

StatLink  <http://dx.doi.org/10.1787/888932794915>

of a retail approach, as assessing the credit risk on an individual basis requires qualified personnel and can imply high administrative costs.

In *portfolio guarantees*, the decision to grant a guarantee is not assessed on an individual basis. Rather, it is based on some common characteristics such as the volume of the loan, a minimum level of creditworthiness based on financial statistics, the intended use of the funds, the geographic location of the firm or its industrial affiliation. This regime typically requires a lower expertise on the part of the CGS and entails lower administrative costs.

A portfolio approach is generally observed in the case of guarantee schemes managed by specialised SME lending institutions. Examples include the Canada Small Business Financing Program (CSBFP), which stipulates that SMEs contact the bank that assesses their credit risk. If the SME has a turnover lower than CAD 5 million and the loan is smaller than CAD 350 000 or CAD 500 000, depending on the intended use of the loan, then the bank can make use of the CSBFP's guarantee.

In some cases, the portfolio approach is combined with retail assessment. In France, for instance, OSEO assesses guarantees on a retail basis, except for small guarantees commitments, which are assessed on a portfolio basis. A similar approach is taken by Thailand's Small Business Credit Guarantee Corporation (SBCG), which has both a portfolio and retail schemes. The choice of which scheme is used depends mainly on the size of the loan: the portfolio scheme is intended for small loans while larger credit volumes are guaranteed under the retail scheme. Also in Korea, the retail approach is dominant, with 99.3% of KODIT's guarantees issued directly to borrowers in 2011.

In *wholesale guarantee systems*, there is no direct relationship between the CGS on one side and the borrower and lender on the other. Typically, the role of CGSs is to provide counter-guarantees for non-banking intermediaries, often micro-credit institutions. In fact, in the case of micro-credit, transactions costs implied by retail or portfolio assessment may be relatively high. ACCION International³ and Women's World Banking⁴ are examples of microfinance networks that have been experimenting with this model. In OECD countries, an example for a wholesale guarantee system is Italy's Central Guarantee Fund, which provides counter-guarantees to MGSs (see Box 3.2).

Risk management

Risk management is extremely important for the sustainability, performance and impact of guarantee schemes, since it affects the incentives of borrowers and lenders and determines the incidence of moral hazard type behaviour. Key levers in guarantee risk management are coverage ratio, term of the guarantee (i.e. length) and pricing.

The *coverage ratio* defines the extent to which a defaulted loan is guaranteed. The share varies across schemes, ranging from 20% to 100%. Auction systems can be used to assign guarantee rights, which determine different coverage ratios, as in the case of Chile's FOGAPE (Box 3.4). Beck et al. (2010) report a median coverage ratio of 80% across 76 schemes worldwide. An 80% ratio is also set as the upper threshold for guarantee coverage through public funding in the European Union State Aid Framework. In 2009-2010, this limit was temporarily increased to 90%, in order to ease guarantee support by member states for credit constrained SMEs.

In addition to a maximum coverage, some schemes have a maximum *guarantee period*, whose specification is often used when start-ups are financed, as in their case the default risk tends to decrease over time. Typically, the schemes also set an upper threshold to the

Box 3.4. Auction systems for guarantee rights: Chile's FOGAPE

Coverage rates of the Chilean credit guarantee scheme FOGAPE (*Fondo de Garantía para Pequeños Empresarios*) are determined by auctions which take place four to six times per year. The scheme is government owned and managed by BancoEstado, the state-owned bank, which also manages the auctions.

In the auctioning process, banks can acquire guarantee rights for three types of credit, depending on their maturity. About half of guarantee rights are for long-term credits, 30% are for short-term credits and the remaining 20% are for contingent operations, such as letters of credit. In each bid, banks indicate the amount of guarantee rights they wish to acquire as well as the maximum coverage rate associated with the guarantee. Guarantee rights are assigned starting with the bid indicating the lowest coverage rate. Subsequently, bids with higher coverage rates are assigned until the total amount of guarantee rights equals total bids. A single bank can acquire no more than two thirds of all guarantee rights each time. After a bank has been assigned guarantee rights, FOGAPE specifies the details of the guarantee contract, in particular the fees charged to the borrower and the coverage rate.

The BancoEstado can influence the coverage rate by setting reservation prices which depend on the type of products. For long-term loans and contingent credits coverage rates must not exceed 80%, for short run credits the maximum is 70%. Moreover, the BancoEstado can exclude banks if their previous default rates exceed a given threshold or if banks do use less than 90% of the guarantees previously acquired. Between 2006 and 2010, coverage rates have increased from 65% to 77%. In 2011, evidence indicates a reduction to 68%. At the same time, the number of guarantees has increased from 25 000 in 2006 to 64 000 four years later.

Source: Benavente et al. (2006); Bozzo (2011).

amount of the guarantee, which may differ depending on the firm size class. In France, SOCAMA (*Société de Caution Mutuelle Artisanale*), a mutual institution supporting craftsmen through credit guarantees, engages with rather small guarantee commitments, up to EUR 200 000. On the other hand, OSEO, which targets enterprises in higher size segments, sets the guarantee limit at EUR 1.5 million. The maximum guarantee period varies broadly across schemes, in a range between 5 and 25 years. Nevertheless, the average guarantee period is generally below 10 years and, in many cases, it is not above 5 years (see Table 3.1).

Pricing is a key element in the design of CGSs. These generate revenue by charging fees for the provision of a loan guarantee, which also impact incentives of borrowers. Two common types of fees include up-front fees and annual fees, which often coexist. The former have the advantage of discouraging unqualified borrowers and ensuring that early defaulting borrowers contribute to the scheme, as well as limiting administrative costs. At the same time, up-front fees imply a higher financial burden for the user at the start of the investment. This method is for instance applied by BBMKB, in the Netherlands, which charges a flat rate of 3% over the guaranteed loan amount, to be paid up-front. Firms in specific target groups often enjoy fee reductions. For instance, Korea's KODIT reduces fees by 0.1%-0.3% if the firm is innovative or engaged in green growth.

The calculation of fees can be based on the size of the loan or on the amount guaranteed. According to a survey conducted in 2012 by AECM on 30 schemes in Europe, the most common basis for premium is the nominal amount of the guarantees. In some cases, annual fees are variables and related to the type of loan or guarantee or to the borrower's risk profile. Although more than one criterion is often used, an internal rating system

generally guides the process, which also takes into account the term of the guarantee and the quality of collateral (AECM, 2012b).

Whether the fee is paid by the borrower or the lender depends on the scheme. In some cases, like OSEO in France and the mutual schemes in Spain and Portugal, SMEs pay the guarantor directly, without intermediation from banks. In the case of Canada's CSBFP, it is the lender who has to pay the upfront fee of 2% and the annual fee of 1.25%. In principle, under this setting, the bank can transfer both fees to the borrower. In fact, the CSBFP's 2% upfront fee can be financed as part of the loan, whereas, the annual fee may be collected via an increased interest rate⁵.

Raising the price of the loan, by charging guarantee fees, may ensure additionality of the scheme, as only higher risk borrowers that cannot obtain financing without the scheme are attracted. At the same time, if adverse selection sets in, and highly risky borrowers self-select into the programme, the default probability of the scheme may increase and its overall performance lower. Thus, guarantors face a trade-off between, on the one hand, setting prices that ensure additionality and allow the fund to cover its costs, and, on the other, limiting premiums to attract borrowers with a manageable risk profile.

In some cases, partial or full public subsidies are granted to help SMEs pay the guarantee premium. The rationale is that the additional cost for SMEs, on the top of the interest rate, may limit the reach of the guarantee scheme, although in many cases the fee is compensated, at least in part, by a reduction in the interest rate applied by the lender. For example, in Hungary, for the guarantees issued by the Rural Credit Guarantee Foundation (AVHGA), the premium is partially covered by public subsidies if the loan programme is itself subsidised. In the Czech Republic, the State contributes substantially to the payment of the guarantee fees to the Czech-Moravian Guarantee and Development Bank. In the case of Spain's MGS, subsidies on premiums are in some instances provided by regional governments (AECM, 2012b).

4. The role of Credit Guarantee Schemes during the financial crisis

In the aftermath of the 2008-2009 global financial crisis, as access to finance for enterprises deteriorated, many governments responded by injecting capital into their loan guarantee programmes. In many countries, existing programmes were ramped up, in terms of the total amount of guarantee funds and direct lending available, the percentage of the loan guaranteed, the size of the guaranteed or direct loan and the number of eligible enterprises. In some cases, co-financing by public agencies was increased and banks pension funds were used to augment loan guarantee schemes.⁶

In the US, the SBA temporarily increased its guarantee coverage from around 75% to 90%. In Korea, the coverage of guarantees was increased significantly, sometimes to 100%. In the European Union, raising the coverage threshold to over 80% was made possible by temporary changes to the provisions regarding admissible state aid. As a case in point, in France, OSEO increased the coverage ratio to 90%. The EU Temporary Framework for State Aid also allowed for higher aid amounts of EUR 500 000 (equivalent to EUR 3.8 million in guarantees) instead of EUR 200 000 over three years.

Other changes in existing schemes' objectives and operations included: guaranteeing short-term loans and countercyclical loans; postponing the repayment of guaranteed loans; and combining guaranteed loans with business advice services ("get started loans") (OECD, 2010; OECD, 2012).

In some countries, new guarantee programmes were introduced. In the UK, the Enterprise Finance Guarantee (EFG) was launched in 2009, replacing the Small Firm Loan Guarantee (SFLG) scheme. EFG supports counter-cyclical lending, but, to ensure additionality, applicants must show that they have first been denied a loan outside of the EFG scheme. Furthermore, with respect to the earlier scheme, it provides assistance to a larger number of firms, as eligibility criteria have been modified. While SFLG provided guarantees on loans up to GBP 250 000, the EFG indicates an upper limit of GBP 1 million. Also, the upper limit of the turnover for beneficiaries increased from GBP 5.6 million to GBP 25 million. As a result, there was a three-fold increase in the volume of guaranteed loans between 2007-2008 and 2009. In March 2012, the turnover ceiling was further increased to GBP 41 million and the Fund is expected to benefit a significantly larger share of enterprises.

In Ireland, where total business lending declined during the crisis and even more during the recovery period, in April 2012, the government announced the creation of a first Credit Guarantee Scheme. In its initial stage, this will facilitate up to EUR 50 million of additional lending per annum to SMEs for three years, providing guarantees at 75% coverage rate to banks for loans up to EUR 1 million. The target groups will be commercially viable SMEs which have a good performance, solid business plan and a defined market for their goods and services.

Table 3.2 shows the trend in government guarantee support over 2007-2011 for Scoreboard countries, measured in terms of value of guaranteed loans. In most cases, government guarantees provided to SMEs, via the financial system, increased dramatically over 2009-2010. The value of guaranteed loans increased by 65% in Turkey, 80% in Chile, 86% in Italy, 155% in the Netherlands and 338% in Denmark. In Spain, the stock of guarantees intended for the securitisation of funds increased by 23%. In Switzerland, which reports data on government loan guarantees, rather than on guaranteed loans, their value increased by 15%, from CHF 187 million to CHF 215 million.

In a few countries, the upsurge in government guarantee activity took place earlier, at the outbreak of the crisis. Between 2008 and 2009, government guaranteed loans increased by 64% in France and by 87% in the Czech Republic. In Portugal, loans to SMEs guaranteed by the public Mutual Counter-guarantee Fund more than doubled. In Hungary, the flows of guaranteed loans increased by 38%. In Korea, the value of loans guaranteed by KODIT and KIBO increased by 42% between 2007 and 2009, and remained stable afterwards, also due to the policy measure that allowed the roll-over of loans without any guarantees.

In 2011, in some countries, namely the Czech Republic, France, Italy, Korea, the volume of government guaranteed loans declined, although, with the exception of the Czech Republic, it remained far higher than in the pre-crisis period. In some cases this matched a negative or flat trend of SME loans, which may suggest a general slowdown in SME lending activity. In the UK, the level of guaranteed loans declined in both 2010 and 2011, as banks were reaching their limit in terms of what they could receive under the guarantee programmes. Thus, they became less willing to lend, whereas the SMEs' uptake of the programme continued to increase. In fact, guaranteed loans utilised compared to those offered increased over the period from 83% to 90%. As a result, in March 2012, the UK government announced an increase in the limit on guarantee payments which can be made to lenders, to encourage further lending.

Table 3.2. Government guaranteed loans in Scoreboard countries,¹ 2007-11

	Unit	2007	2008	2009	2010	2011	Definition
Canada	CAD billion	1.2	1.3	1.2	1.3	1.3	Guaranteed loans for SMEs, flows from central government
Chile	CLP million	284 405	263 610	799 310	1 441 186	1 964 176	Government guaranteed loans to SMEs, flows
Czech Republic	CZK million	2 959	5 094	9 550	10 070	630	Government loan guarantees, SMEs, value of guarantee fund
Denmark	DKK million	1 30.5	93.8	117.8	515.6	824.8	Government guaranteed loans to SMEs
France	EUR million	5 850	6 861	11 267	10 883	8 826	Government guaranteed loans to SMEs
Hungary	HUF million	381 400	436 400	600 300	472 019	437 200	Government guaranteed loans to SMEs, flows
Italy	EUR million	2 300	2 300	4 900	9 100	8 400	Government guaranteed loans to SMEs by the Central Guarantee Fund
Korea	KRW trillion	39.7	42.9	56.3	56.1	55.5	Value of loans guaranteed by KODIT and KIBO, stocks
Netherlands	EUR million	409	400	370	945	1 040	Government guaranteed loans to SMEs
Portugal	EUR million	740	1 552	4 961	6 285	6 147	Government guaranteed loans to SMEs by the public Mutual Counter-guarantee Fund
Russian Federation	RUB billion	n.a.	n.a.	38.9	66.8	122.7	Loans guaranteed by regional funds of SME assistance
Serbia	EUR million	n.a.	10.5	2.6	2.2	n.a.	Loans to SMEs guaranteed by government, flows
Slovak Republic	EUR million	115	157	143	139	167	Government guaranteed loans to SMEs, flows
Spain ²	EUR million	5 210	7 053	5 906	7 236	7 502	Government guaranteed loans to SMEs, stocks
Sweden	SEK million	157	131	107	0 ³	0 ³	Government guaranteed loans, by Swedish Credit Guarantee Association
Thailand	THB billion	n.a.	n.a.	21	n.a.	n.a.	Government guaranteed loans to SMEs, stocks
Turkey	TRY million	75.4	402.5	790.6	1 302	1 622	Government guaranteed loans
United Kingdom	GBP million	207.0 ⁴	178.0 ⁴	759.5	588.6	362.6	The value of Enterprise Finance Guaranteed (EFG) loans offered to SMEs
United States	USD billion	20.6	16.1	15.4	22.5	18.7	Government guaranteed loans, SMEs, by the Small Business 7(a) loan program


1. Finland and Switzerland are not included as they report data on government loan guarantees, but not on guaranteed loans or guarantee funds.

2. Figures are for guarantees issued for the securitisation funds (stocks).

3. No new government guaranteed loans for SMEs were issued in 2010-2011 by SKGF (Swedish Credit Guarantee Association), which, however, is not the only provider of government guaranteed loans for SMEs.

4. Figures are for the Small Firms Loan Guarantee scheme and relate to financial years.

Source: National Scoreboards.

StatLink  <http://dx.doi.org/10.1787/888932794934>

In other countries, including Chile, Denmark, the Netherlands, Russia, Spain and Turkey, the upward trend in guarantees or guaranteed loans continued in 2011. In addition, in Finland, where Finnvera loan guarantees had increased during the crisis and then fell moderately in 2010, the positive trend in 2011 led to an overall increase of 19% in relation to the value of SME guarantees recorded in 2007. In this context, Canada represents an exception, as the value of government guaranteed SME loans remained rather stable over this period. However, also in the case of Canada, contrary to other stimulus measures implemented as part of the government Economic Action Plan, changes to the CSBFP, such as the increase in the maximum loan amount, were not phased out in the course of 2011.

In the US, on the other hand, the 2008-2009 crisis had a pronounced impact on the SBA's Capital Access Programs. In particular, the volume of its two largest loan guarantee programmes declined sharply, to rebound in 2010 after the major interventions by the Federal government. The programmes were especially affected by the drop of inter-bank confidence and the negative implications on activities in the secondary market, where about 40% of the 7(a) guaranteed loans are traded (OECD, 2012).

Over 2011-2012, in some countries, as crisis measures were phased out and new programmes were introduced to foster growth and job creation, some guarantee instruments have been tailored to specific categories of SMEs, such as start-ups or innovative firms. In other cases, guarantee schemes have been introduced to facilitate equity investments, addressing, among other objectives, the need for de-leveraging, or support firms during key transitions, including expansion or ownership transmission. For instance, in the Netherlands, the Growth Facility programme (*Groefaciliteit*), which offers banks and private equity companies a 50% state guarantee on newly issued private equity capital for the private sector (including SMEs), was extended in October 2009. The maximum individual equity capital amount, for which the 50% state guarantee can be applied, was raised from EUR 5 million to EUR 25 million (OECD, 2010).

In some European countries, characterised by established mutual guarantee institutions, these also played an important role to ensure liquidity was maintained for SMEs, as illustrated by Mistrulli et al. (2011) and Bartoli et al. (2013) for the Italian case. Indeed, the financial support provided to MGSs by central or regional governments, in the form of co- or counter-guarantees, and the loosened eligibility requirements suggest they were identified as a potentially effective countercyclical instrument. For some of these schemes, this has resulted into greater exposure to insolvency, which may affect their long-term sustainability. This also combines with the on-going transformation induced by regulatory reforms, such as Basel II and Basel III, which have raised the complexity of the environment and increased the need to upgrade skills and organisational efficiency of guarantee schemes, also to limit the transfer of potential increases in administrative costs to the prices of the services provided.

In several instances, the response to these challenges has been an increase in scale of MGSs, through mergers and consolidation, to reduce the relative costs of the service, as well as to broaden the offer of guarantee instruments. However, this increased scale may come at the cost of proximity, that is, of loosening the relationship these schemes have with SMEs and their local systems. An emerging response to this trade-off is the structuring or strengthening of a vertical guarantee filière, which includes: i) first-tier schemes that are close to the firms and the local systems, with larger supervised schemes gradually gaining the largest market shares; ii) second-tier regional or inter-sectoral schemes, which provide mainly counter-guarantees or co-guarantees to the first level and are the main counterpart

of public institutions for the allocation of public resources to the guarantee system; iii) and a well-established national guarantee fund, which provides counter-guarantees (see Box 3.2).

5. Evaluation of Credit Guarantee Schemes

Evaluation is an integral part of the policy process and is all the more important at times of changes in relevance, nature and scope of policy instruments. This is the case for CGSs, which are long-established elements of many financial systems worldwide, but whose policy relevance has increased in recent years. Recent developments in CGSs have resulted, in some cases, in changes in scale, operational characteristics and targets. This raises questions about their role and sustainability over the long term.

In spite of the growing attention by policy makers on CGSs, however, there is a dearth of analysis to systematically inform the process of design, implementation and evaluation of these instruments (Beck et al., 2010). As this chapter illustrates, there exists a large heterogeneity across schemes, which makes comparative assessment particularly challenging. However, some common issues can be identified, based on general evaluation dimensions, such as sustainability and additionality.

5.1. Financial sustainability

Financial sustainability refers to the ability of the scheme to generate autonomously the net resources required for operating. It is thus determined by comparing operating costs and financial returns of the scheme (Table 3.3). To the extent that CGSs are financed by public money, the degree of financial sustainability captures the taxpayers' burden from the operations of the scheme.

Table 3.3. **Financial sustainability: Key variables**

Costs	Financial returns
Costs of funds	Guarantee fees
Operational costs	Administrative fees
Losses on guarantees	Return on financial investments

Source: Adapted from Deelen and Molenaar (2004).

Operational costs and loan losses are major determinants of financial performance, and both are closely linked with the design of the guarantee scheme. The operational costs are mainly composed of administrative and management costs, which depend on the approach to risk management. The retail approach to credit risk assessment and the direct engagement in the loan follow-up are commonly associated with high costs (e.g. Beck et al., 2010), since they imply more administrative tasks and qualified personnel. On the other hand, if the guarantor has an information advantage for retail appraisal, a retail approach can allow for higher quality in risk assessment and lower the probability that the borrower will default on a loan, thus reducing the losses incurred by the scheme (Honohan, 2010). The effective loss implied by defaulted loans depends also on other risk management tools, such as counter-guarantees, insurance, and portfolio securitisation.

Other elements in the scheme design determine the guarantee commitment and affect the default rate on loan guarantees. The eligibility criteria and the guarantee terms

(e.g. coverage ratio, guarantee limits) impact directly on the amount paid out to lenders, but also produce an indirect effect on financial performance, as selection mechanisms and signals to potential borrowers, limiting or increasing adverse selection and moral hazard.

In terms of financial returns, CGSs typically generate income by charging a guarantee fee to borrowers and/or lenders and by investing their own funds, whose availability is closely related to the losses incurred in the guarantee activity. As commented in Section 3, the guarantee fee carries a trade-off: charging high fees may ensure that costs are covered and that only constrained firms are attracted to the scheme, but, on the other hand, it can limit the uptake to highly risky borrowers.

Evidence

Following the extensive use of guarantees to limit effects of the crisis on SME lending, the exposure of CGSs to risk has substantially increased over the last years. Default rates have increased in most cases, which may threaten the soundness of schemes over the medium-long term. According to a recent survey of nine large guarantee players in Europe and Asia, guarantee schemes used as anti-crisis tools for supporting SMEs reported a considerable increase in bad debts (KPMG, 2012).⁷ In Spain, for example, the default rate for MGSs increased from 6.09% in 2007 to 12.68% in 2009. However, this compares with an increase from 2.76% to 8.50% for banks and from 2.89% to 9.10% for savings banks ('Cajas'), which suggests, for mutual schemes, which are more exposed to risk in light of their activity, the relative increase was smaller than for other financial institutions (Afi and CEGGAR, 2010). In Italy, in 2011, 50% of the MGSs registered net losses (Schena, 2012).

The countercyclical expansion of CGSs has responded to temporary policy measures and has most often implied a greater commitment of public finances, in the form of direct funding or counter-guarantees. As anti-crisis measures are phased out, the public support in these forms is also expected to decline. At the same time, as solvency problems persists, the increased default rates may continue to affect the financial performance of the schemes and the burdens on the public budget. In this regard, however, continuing the extraordinary support measures may result in much of the credit risk to be transferred from financial markets to the public sector (OECD, 2010).

However, it is important to note that some form of public support is inherent in credit guarantee systems in many countries. Although the empirical evidence is scarce, existing studies identify a public subsidy element in many different types of schemes, including private or mixed models, which may benefit from public co- or counter-guarantees. Income from fees is generally not sufficient to cover both operational costs and loan losses (Green, 2003; Benavente et al., 2006; Honohan, 2010). This evidence suggests that public support to the credit guarantee system is common and possibly essential for the business to be viable for private investors, at conditions that also meet government objectives, such as the service to a large number of viable but credit-constrained SMEs.

At the same time, CGSs' income position appears to be closely linked to their design, approach to credit risk assessment, organisation efficiency and quality of management. For instance, a comparison of 76 CGS across developed and developing countries shows that losses (as measured by the share of defaulted loans) are lower in the case of younger schemes, which may be explained by the time needed for guarantee portfolios to consolidate and defaults and losses to emerge (Beck et al., 2010). The study also find that losses are lower when the private sector is actively engaged in the scheme, although the direct involvement

of government in recovery, management and funding *per se* is not associated with higher losses. This suggests the expertise of private financial institutions may be important in assessing and managing risk, but also that public schemes may pursue other objectives over financial sustainability. The country's overall level of development and the size of the fund do not seem to have an effect on the performance of the scheme, which may however be affected by other country-level characteristics, such as the development of the financial sector and the quality of the legal and regulatory system.

The recent regulatory reforms of the financial system (e.g. Basel II and Basel III) also have implications for the financial performance of CGSs. In fact, the greater complexity of the regulatory environment is likely to increase operational costs, whose level may change also as a result of the greater scale and broader scope of schemes triggered by the new requirements. Greater efficiency will thus be needed for CGSs to be sustainable and to limit the transfer of these costs to prices of the guarantee products and services.

Urging schemes to generate sufficient income to be financially independent can provide appropriate incentives for efficient management and organisation. At the same time, this approach can induce overly risk-averse behaviour on the part of the scheme, implying that only the more creditworthy firms obtain loan guarantees. This, in turn, increases the probability that the riskier, but viable SMEs, in principle the target of guarantee schemes, remain without funds (Deelen and Molenaar, 2004). This is especially the case when the loan guarantee programme is part of a policy to support a group of particularly credit constrained firms, such as start-ups, female entrepreneurs or businesses located in a disadvantaged geographic area.

In light of the policy objective to mobilise loanable funds to the advantage of credit constrained SMEs, the adoption of a multi-dimensional perspective in the assessment of public schemes, rather than a focus on financial sustainability *per se*, has been proposed (e.g. Zecchini and Ventura, 2009). Sustainability is thus assessed against the reduction in guarantee premiums, which may facilitate uptake by credit constrained viable businesses. In other terms, sustainability and additionality are evaluated at the same time, taking into account the alternative use made of public resources to achieve similar economic objectives.

More investigation is needed in this area, but assessing financial sustainability in practice has proved difficult due to the lack of accurate and timely data. In the case of publicly owned credit guarantee schemes, these are often only part of a set of financing instruments for SMEs. The possibility to assess the individual scheme is limited if the responsible Ministry or government-related agency does not produce separate financial statements.

Adequate accounting practices are crucial for the management and assessment of CGSs. This is especially the case for public guarantees, as governments are often drawn to such schemes because of relatively small upfront cash commitment, against a possibly large volume of credit that may be supplied. However, the adequacy of the scheme may become evident only over time, as losses start to emerge. In particular, accounting provisions should be made for foreseeable losses in advance (Honohan, 2010). This accounting principle is embodied in the International Financial Reporting Standards (FRS37 and 39), which recommend that financial guarantees, as all financial liabilities, are recognized from the outset in the balance sheet of the guarantor at fair value plus transaction cost.⁸

5.2. Financial and economic additionality

Financial additionality captures the increase in the flow of funds towards viable SMEs that can be attributed to the existence of the scheme. It therefore relates directly to the rationale for developing or supporting guarantee schemes, that is, to mitigate failures in financial markets, which prevent viable firms from obtaining funds. Economic additionality describes the effect of increased access to finance on overall economic welfare, measured in terms of changes in sales, employment, investment and innovation performance of the small businesses supported, or, at the macro level, by the fostered competitiveness and economic growth.

A major challenge for CGSS' additionality comes from selection mechanisms, whose importance largely depends on the design of the scheme. The first selection mechanism concerns the type of firms which seek guaranteed loans. As financial conditions of guaranteed credits are generally more favourable than ordinary loan contracts, the scheme may attract borrowers with solid creditworthiness, which might be able to obtain funds without the guarantee support. At the other extreme, financial additionality may be absent if loan guarantees are attracting firms which seek finance for highly risky projects (adverse selection) or if the existence of the guarantee induces a riskier behaviour by borrowers and lenders (moral hazard).

A second selection mechanism that may reduce additionality takes place at the level of the lending institutions, as they may have an incentive to transfer regular credits to the program, to reduce the overall risk of their outstanding credits. Additionality may also be reduced by "inter-lender substitution", that is, by established borrowers shifting their demand towards lending institutions that are linked to guarantee schemes, whose observed uptake would thus not reflect services to other, credit constrained companies (Vogel and Adams, 1997).

The design of the scheme is crucial to govern the selection mechanisms and the incentives of borrowers and lenders. In particular the risk management tools described in Section 3 may have a distinct impact on additionality, as well as on sustainability:

- *Credit risk assessment.* Retail appraisal and close follow-up by the guarantor may reduce adverse selection and moral hazard, though at relatively high operational costs.
- *Coverage ratio.* A high coverage ratio is typically an attractive feature for borrowers and lenders, but may lower the incentive of the lender to properly screen borrowers. At the same time, low coverage ratios may limit the scheme's uptake by both firms and lenders.⁹
- *Eligibility of CGSSs.* In an attempt to maximise additionality, some schemes restrict eligibility to those firms which have been denied credits on regular financial markets. In some cases, additionality is sought by narrowly defining the target of the programme, which may be a sector or specific categories of firms, for which severe market failures were identified. However, overly restrictive schemes bear the risk that credits are artificially modified to fit formal requirements (Vogel and Adams, 1997).
- *The price of guarantees.* CGSSs need to strike a balance between financial returns and attraction of viable customers. While high fees may increase operating budget, they may also discourage creditworthy firms from applying for guarantees and reduce the overall uptake of the scheme, hence impact on its capacity to leverage the equity fund.

Evidence

Credit guarantee tools generally proved effective in restoring a sustainable level of financing for credit-constrained SMEs during the recent financial crisis (OECD, 2010). For example, the European Association of Mutual Guarantee Societies (AECM) estimates that, in 2009, the anti-crisis guarantee instruments delivered by its members had provided over 120 000 SMEs access to finance that was crucial to maintain operations (AECM, 2010). Based on a survey of nine large guarantee schemes in Europe and Asia, KPMG (2012) estimates that 80% to 90% of the borrowers would not have been able to access credit without the guarantee support.

Early studies on the impact of mutual schemes during the crisis also show that they have contributed to ease SME financial tensions. In the case of Italian *Confidi*, the most important effect of MGSs was to increase the credit line for borrowers (Bartoli et al., 2013). This was the case in particular for new affiliated firms, which suggests the affiliation to a mutual scheme was key in signalling to banks the creditworthiness of potential borrowers. On the other hand, Mistrulli et al. (2011) indicate that MGSs eased access to greater loan volumes at a lower cost, but also attracted a larger number of riskier firms.

Although a proxy for financial additionality, the increased uptake of schemes and their leverage ratio, defined as the ratio of outstanding guarantees to the size of the guarantee fund, suggests that, following changes in eligibility, terms and coverage, many schemes were effective in mobilising a larger amount of bank credit for a larger number of credit-constrained businesses. Indeed, the leverage effect is one of the most important arguments for the implementation of CGSs (Levitsky, 1997; Honohan, 2010). At the same time, the leverage ratio can be used to monitor the financial sustainability of CGSs. If the amount of outstanding guarantees is large compared to the capitalisation of the fund, the scheme becomes in fact more vulnerable to default events. Some schemes therefore specify an upper limit for the leverage ratio.¹⁰

The higher leverage ratio observed for many schemes in the aftermath of the crisis can also be related to the greater efforts by public authorities and guarantee schemes to increase SMEs' awareness about credit guarantee opportunities. In fact, the ratio directly depends on the popularity of the scheme among the target population. A high leverage ratio is typically observed in the case of long-established mutual schemes, which enjoy a solid reputation among lenders and borrowers. On the other hand, a low leverage ratio can be explained by lack of awareness or reputation. This is typically the case when users do not trust the scheme to respect its commitment to reimburse promised guarantees, or when rules and responsibilities governing the guarantee contract are not clearly stated.¹¹

The sparse evidence on the crisis period suggests that policy measures strengthened a dimension of CGSs, financial additionality, which has long been recognised by the literature. Numerous studies show that this additionality largely takes the form of better conditions in accessing credit for SMEs, such as higher loan volumes, lower interest rates or longer loan maturity. On the other hand, the evidence is less conclusive with regard to the increase in the number of loan beneficiaries and, especially, to greater access to finance for new entrepreneurs or firms in innovative sectors, for which schemes' targeted mechanisms are most relevant (e.g. Riding et al., 2007; Lelarge et al., 2009; Zecchini and Ventura, 2009; Columba et al., 2010; Cowling, 2010; D'Ignazio and Menon, 2012).

If most existing studies provide positive evidence of the *financial* additionality of guarantee schemes, measuring *economic* additionality has proven more difficult, due

to methodological limitations and lack of data, especially at the micro level. The main challenge is typically related to the identification of an appropriate control group, so that firms which have accessed guaranteed loans can be analysed against other firms, with similar characteristics and/or behaviour, which have not benefited from guarantees. In this regard, financial statements would be often required from both treated and untreated SMEs. In many cases, however, this information is not available or disclosed for assessment purposes.

6. Conclusions and policy considerations

In many countries, CGSs represent an established credit risk transfer mechanism and policy tool, which has experienced unprecedented growth over the last several decades. In some OECD countries, CGSs have been an instrument of choice for policy makers to improve access to finance by SMEs and entrepreneurs during the recent global financial crisis. In several non-OECD countries, CGSs have also developed rapidly as a mechanism to expand credit markets and improve financial inclusion.

The countercyclical use of CGSs to offset SME financial distress, through direct funding or counter-guarantees, has implied, in many instances, an important change in their scale and scope. Evidence shows that CGSs have been effective in mobilising large amounts of credit and easing access to finance for a larger population of enterprises. This however has substantially increased their exposure to risk, which may threaten their soundness over the medium to long term. These changes are taking place in conjunction with the on-going transformation of guarantee systems induced by regulatory reforms, including mergers and consolidation, intended to reduce the costs of the service and broaden the offer of guarantee instruments.

The expansion of CGSs as a policy instrument has triggered greater demand for monitoring and evaluation. As the present chapter illustrates, there exists a large variety of schemes, which differ along several dimensions, such as the ownership structure and funding, the legal and regulatory framework, and the operational characteristics, including types of services, eligibility criteria, guarantee assignment process and credit risk management. This heterogeneity and the lack of data limit the scope for comparative evaluation. Nevertheless, some general issues and policy considerations can be highlighted:

- As financial intermediaries, CGSs are highly sensitive to the legal and regulatory environment. This, combined with the schemes' characteristics, affects the incentives of lenders and borrowers and the incidence of moral hazard in the financing relation. Supervision, transparency and certainty about contract enforcement are crucial for the development and sustainability of guarantee systems. Furthermore, the effect of regulatory reforms on their activities and the implications of differentiated tax regimes should be thoroughly assessed, taking into account the specific nature and working mechanisms of different types of schemes.
- Often, several CGSs exist in a country, with direct or indirect government participation, which are part of a broader set of government measures to assist SMEs. It is important that the goals and the population targeted by each scheme be clearly specified, to avoid duplication, and that guarantee instruments are co-ordinated with other SME finance support measures.
- The design of CGSs is crucial for their effectiveness and sustainability. Target population, coverage ratio, credit risk management and fee structure should ensure additionality,

that is, support access to finance of viable enterprises that face limitations in financial markets. An appropriate design is also crucial to ensure financial sustainability, taking into account on the one hand the need to limit default rates and cover the operating costs, and, on the other hand, the implications that coverage ratio and fees have on the type of applicants.

- CGSs can be an effective instrument to reduce the information gap that exists between lenders and borrowers, especially in the case of SMEs. The experience of mutual institutions suggests that guarantee schemes can be particularly effective in this when they benefit from in-depth knowledge about the market and industry framework of the target SME population. In this regard, public-private partnerships, also including intermediate institutions such as business associations, professional groups and chambers of commerce, can bring highly valuable information to the risk assessment process and guarantee decision. The retail approach and the engagement of a broader set of shareholders should however be considered only when the information advantage outweighs the higher operational costs.
- Public support to the credit guarantee system is common and possibly essential for its long-term sustainability and for the engagement of private investors, at conditions that also meet government objectives, such as the service to a large number of viable but credit-constrained SMEs. A system of public counter-guarantees is especially relevant for private or public-private schemes, as it enhances the guaranteed credit volume that can be made available to SMEs, as well as the schemes' credibility and reputation. During the recent financial crisis, the public counter guarantee function was important to ensure continued effectiveness of these schemes. This suggests counter-guarantee funds can result into important leverage effect of private funds, even at difficult times. However, the ordinary support of government should be clearly distinguished from temporarily extraordinary measures and be designed as to ensure additionality and avoid excessive transfer of risk from the private to the public sector. As a general principle, all parties concerned in addition to the government (SMEs, banks, guarantee schemes) should retain a sufficient share of the risk and responsibility to ensure proper functioning of the system and avoid moral hazard.
- The greater exposure to risk and the transformation induced by regulatory reforms make operational efficiency increasingly important for CGSs. There is a need to upgrade skills and procedures, to navigate a more complex environment, but also to adapt long-established mechanisms to a different scale of operation and to new functions, including the provision of guarantees for non-debt financing (e.g. equity, hybrid instruments), support to SMEs' expansion, innovation and internationalisation.
- In countries characterised by a well-established system of Mutual Guarantee Schemes (MGSs), a trade-off is emerging between efficient scale of the schemes and proximity to borrowers, which historically has been a competitive advantage of mutual systems. In some cases, this has been addressed by accelerating the rationalisation of guarantee provision into a strong credit guarantee *filière*, with a public counter-guarantee fund that acts as a guarantor of last resort. The experience of each individual system is rather unique and difficult to replicate in other areas. However, the principles underlying these systems can offer insights to other countries on the regulatory conditions and incentives that can facilitate bottom up initiatives or private sector engagement.

- Assessment evidence on CGSs is rather scarce. There is a need for more in-depth evaluation, particularly on their financial sustainability and on their financial and economic additionality. There are number of areas where further action is needed for better evaluation:
 - a. It is necessary to improve the availability of firm level data and SME credit statistics, in order to properly address the various forms of self-selection inherent in the provision of credit guarantees and assess additionality of guarantee schemes.
 - b. In order to produce the data necessary for the evaluation of financial sustainability, an accounting approach which accurately records expenditures and incomes of the schemes on a regular basis is required. This is particularly important in the case of public schemes, which are run by a public agency that has several support measures in place.
 - c. Case studies are important to take into account specific contextual elements. These are all the more relevant in the light of the large heterogeneity of schemes, within and across countries.
 - d. More investigation is required on the multi-dimensional aspects of credit guarantee systems, which take into account direct and indirect costs and benefits. Full-fledged assessment demands that financial sustainability and additionality are jointly taken into account, and that CGSs are evaluated against alternative policy instruments. In this regard, substantial improvement is needed to assess the overall welfare implications of guarantee systems.

Notes

1. This is the case of partial credit guarantees, which leave the lender with some of the risk. Variants to partial guarantees include the *pari passu*, where lender and guarantor each absorb a fixed fraction of any loss, and the first-loss, where the guarantor pays out on all the loss up to some fixed fraction of the total loan obligation (Honohan, 2010).
2. The EU Competitiveness and Innovation Framework Programme (CIP 2007-2013) provides capped guarantees to financial intermediaries partially covering portfolios of financing to SMEs. These are known as EU Guarantees and are operated, on behalf of the European Commission, by the European Investment Fund (EIF), under the “SME Guarantee Facility”. The Facility includes four product windows. The “Loan Guarantee Window” consists of guarantees aiming at the general support of SMEs via lending and guarantee institutions, with partial coverage of underlying portfolios of loans, lease agreements or other types of debt finance. The “Micro-Credit Window” supports micro enterprises with a maximum loan amount of EUR 25,000. The “Equity Guarantee Window” supports subordinated or convertible loans to SMEs. Under the “Securitisation Window”, the Facility guarantees mezzanine tranches of SME securitisations subject to the financial intermediary increases its volume of new SME lending in the future.
3. ACCION International is a non-profit organisation founded in 1961, and a pioneer in micro-finance activities, started in 1973. See www.accion.org.
4. Women’s World Banking is a microfinance network, composed of 39 financial organisations from 27 countries, which focuses exclusively on lending to women. See www.swwb.org.
5. At the same time, CSBFP limits the maximum interest rate that the bank can charge at the prime rate plus 3% (including the 1.25% fee).
6. See Table 2.8 in Chapter 2 on “Recent Trends in SME and Entrepreneurship Finance”.
7. The study by KPMG (2012) covers OSEO (France), Garantiqa (Hungary), Perum Jamkrindo (Indonesia), Eurofidi (Italy), CGC Tokyo (Japan), KODIT (Korea), SGR Valenciana (Spain), SBCGC (Thailand) and KGF (Turkey).
8. See www.ifrs.org.
9. Uesugi et al. (2010) show that an excessively high coverage ratio can lead to moral hazard type behaviour. In order to mitigate the credit crunch during the Asian financial crisis in the late 1990s,

the coverage ratio of the Japanese credit guarantee scheme was lifted to 100%. As a consequence, those firms which obtained guarantees displayed lower profitability and a higher probability of falling into distress as compared to firms which did not obtain guarantees.

10. For example, the amount of outstanding guarantees issued by Thailand's Small Business Credit Guarantee fund (SBCG) must not exceed 10 times the fund's capital endowment. In the case of Korea's KODIT, the maximum leverage ratio is fixed at 20.
11. Changes in the leverage ratio can be the outcome of a varied degree of diffusion of the scheme in the target population, but can also result from changes in the scheme's capital endowment. When new capital is injected into the scheme, the leverage ratio tends to decrease. Reversely, an equity drain can boost the ratio. This was recently observed for Korea's KODIT, whose capital endowment increased by more than 70% between 2008 and 2009 as a mean to offset the adverse effect of the economic and financial crisis. Although the measure led to an increase by almost 50% in the amount of guarantees, the leverage ratio decreased from 8.5 to 7.4.

References

- AECM (2010), "Guarantees and the recovery: the impact of anti-crisis guarantee measures", August 2010, available at www.aecm.be/en/guarantees-and-the-recovery-the-impact-of-anti-crisis-guarantee-measures-august-2010.html?IDC=31&IDD=182.
- AECM (2012a), "AECM: 20 years of facilitating growth", September 2012, available at www.aecm.eu/servlet/Repository/?ID=1341.
- AECM (2012b), "AECM: Pricing Survey: How AECM members price their Guarantees?", August 2012, available at www.aecm.be/fr/pricing-survey-september-2012.html?IDC=31&IDD=1605.
- Afi and CERGAS (2010), *Analisis de la Capitalizacion del Sistema de Garantia Reciproca*, Analista Financieros Internacionales, Madrid, 15 March 2010.
- Bartoli, F., G. Ferri, P. Murro, and Z. Rotondi (2013), "Bank-Firm Relations and the Role of Mutual Guarantee Institutions at the peak of the Crisis", *Journal of Financial Stability*, vol. 9(1), pp. 90-104.
- Beck, T., L.F. Klapper and J.C. Mendoza (2010), "The Typology of Partial Credit Guarantee Funds around the World" *Journal of Financial Stability*, Elsevier, vol. 6(1), pp. 10-25, April.
- Benavente, J.P., A. Galetovic and R. Sanhueza (2006), "Fogape: An economic analysis", *Working Papers wp222*, University of Chile, Department of Economics.
- Berger, A.N. and G.F. Udell (1990), "Collateral, loan quality and bank risk", *Journal of Monetary Economics*, Vol. 25 Issue 1, pp. 21-42.
- Berger, A.N., M.A. Espinosa-Vega, W.S. Frame and N.H. Miller (2011), "Why do borrowers pledge collateral? New empirical evidence on the role of asymmetric information", *Journal of Financial Intermediation*, Vol. 20, Issue 1, pp. 55-70.
- Bozzo, A. (2011), Presentation held at the Global Conferences on Guarantee Schemes for SME Financing, available at www.aecm.be/servlet/Repository/presentation-alessandro-bozzo-fogape-chile.pdf?IDR=327.
- Chittenden, F., G. Hall and P. Hutchinson (1996), "Small Firm Growth, Access to Capital Markets and Financial Structure: Review of Issues and Empirical Investigation", *Small Business Economics* 8, pp. 59-67.
- Columba, F., L. Gambacorta and P.E. Mistrulli (2010), "Mutual guarantee institutions and small business finance", *Journal of Financial Stability*, Elsevier, vol. 6(1), pp. 45-54, April.
- Cowling, M. (2010), *Economic Evaluation of the Small Firms Loan Guarantee (SFLG) Scheme*, Institute for Employment Studies, Department for Business Innovation and Skills, UK Government, January 2010, available at www.bis.gov.uk/files/file54112.doc.
- Cressy, R. (2002), "Funding Gaps. A Symposium", *The Economic Journal*, Vol. 112, No. 477, pp. F1-F16.
- De Meza, D. and D.C. Webb (1987), "Too Much Investment: A Problem of Asymmetric Information", *Quarterly Journal of Economics*, vol. 102(2), pp. 281-292.
- De Vincentiis, P. (2008), *The Guarantee Systems and the SMEs Access to Credit*, Bancaria, Roma.
- Deelen, L. and K. Molenaar (2004), *Guarantee Funds for Small Enterprises. A Manual for Guarantee Fund Managers*, International Labour Organisation.

- D'Ignazio, A. and C. Menon (2012), "Evaluating credit guarantees for SMEs: Evidence from Italy", *Bank of Italy Working Paper* (forthcoming).
- Green, A. (2003), "Credit Guarantee Schemes for Small Enterprises: An effective Instrument to Promote Private Sector-led Growth?", *United Nations Development Organisation (UNIDO) Working Paper No. 10*, August 2003.
- Hong, J.-K. (2006), "Supporting Technology Innovation Companies through Technology Appraisal Guarantee Schemes of Korea", *Journal of SME Development*, No. 2, pp. 89-109.
- Honohan, P. (2010), "Partial Credit Guarantees: Principles and Practice", *Journal of Financial Stability*, Elsevier, vol. 6(1), pp.1-9, April.
- KODIT (2010a), "Kodit Annual Report 2010", available at www.kodit.co.kr/html/english/inv_t_relation/ann_report10.jsp.
- KODIT (2010b), "Korea Credit Guarantee Fund & its Services" available at www.afdc.org.cn/afdc/UploadFile/201062332928235.pdf.
- KPMG (2012), *Credit Access Guarantees: A Public Asset Between the State and the Market. International Survey on Guarantee Market Players*, KPMG Advisory.
- Leitner, Y. (2006), "Using Collateral to Secure Loans", *Business Review Q2 2006*, Research Department, Philadelphia Federal Reserve.
- Lelarge, C., D. Sraer and D. Thesmar (2010), "Entrepreneurship and Credit Constraints: Evidence from a French Loan Guarantee Program," NBER Chapters, in: *International Differences in Entrepreneurship*, p. 243-273 National Bureau of Economic Research, Inc.
- Leone, P. and G.A. Vento (2012), *Credit Guarantee Institutions and SME Finance*, Palgrave Macmillan.
- Levitsky, J. (1997), "Credit Guarantee Schemes for SMEs – an international review" *Small Enterprise Development*, vol. 8(2), p. 4-17, June.
- Locatelli, R. (ed.) (2012), *Rischi, patrimonio e organizzazione nei Confidi*, Associazione Ricerche su Imprese, Intermediari, Mercati – ARIME, Milan.
- MacMillan Committee (1931), *Report of the Committee on Finance and Industry*, Royal Command 3897, HMSO, London.
- Mistrulli, P.E., V. Vacca, G. Corbisiero, S. del Prete, L. Esposito, M. Gallo, M. Graziano, M. Lozzi, V. Maffione, D. Marangoni and A. Mig (2011), "Mutual Guarantee Institutions (MGIs) and Small Business Credit During the Crisis", *Questioni di Economia e Finanza (Occasional Papers)*, 105, Bank of Italy, Economic Research and International Relations Area.
- OECD (2006), *The SME Financing Gap. Theory and Evidence*, Volume I, OECD, Paris.
- OECD (2010), *Assessment of Government Support Programmes for SMEs' and Entrepreneurs' Access to Finance during the Crisis*, OECD, Paris.
- OECD (2012), *Financing SMEs and Entrepreneurs 2012. An OECD Scoreboard*, OECD Publishing, Paris.
- Pia, P. (2008), "The Credit Guarantee System in Spain", in P. De Vincentiis (2008), *The Guarantee Systems and the SMEs Access to Credit*, Bancaria, Roma, pp. 153-183.
- Riding, A., J. Madill and G. Jr. Haines (2007), "Incrementality of SME Loan Guarantees", *Small Business Economics* 29:47-61.
- Schena, C. (2012), "L'adeguatezza patrimoniale dei Confidi: profile normative e prospettive gestionali", in R. Locatelli (ed.), *Rischi, patrimonio e organizzazione nei Confidi*, Associazione Ricerche su Imprese, Intermediari, Mercati – ARIME, Milan.
- Stiglitz, J. and A. Weiss (1981), "Credit Rationing in Markets with Imperfect Information", *American Economic Review*, vol. 71(3), pp. 393-410.
- Uesugi, I., K. Sakai and G.M. Yamashiro (2010), "The Effectiveness of the Public Credit Guarantees in the Japanese Loan Market", *Journal of the Japanese and International Economies* 24, 457-480.
- Vogel, R.C. and D.W. Adams (1997), "Costs and benefits of loan guarantee programs", *The Financier*, 4(1-2), Feb./May.
- Zecchini, S. and M. Ventura (2009), "The Impact of Public Guarantees on Credit to SMEs", *Small Business Economics*, vol. 32, pp. 191-206.



From:
Financing SMEs and Entrepreneurs 2013
An OECD Scoreboard

Access the complete publication at:
https://doi.org/10.1787/fin_sme_ent-2013-en

Please cite this chapter as:

OECD (2013), "Thematic Focus: Credit Guarantee Schemes", in *Financing SMEs and Entrepreneurs 2013: An OECD Scoreboard*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/fin_sme_ent-2013-5-en

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.