



PUTTING IN PLACE THE CONDITIONS TO SET UP A CREDIT GUARANTEE SCHEME FOR AGRIBUSINESS SMEs IN UKRAINE

Technical Report

Project Summary
March 2016



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PUTTING IN PLACE THE CONDITIONS TO SET UP A CREDIT GUARANTEE SCHEME FOR AGRIBUSINESS SMEs IN UKRAINE

The project *Putting in Place the Conditions to Set up a Credit Guarantee Scheme for Agribusiness SMEs in Ukraine* (CGS project) emerges out of the OECD Sector Competitiveness Strategy for Ukraine, which identified high-potential sectors in the Ukrainian economy and competency-based barriers that were hindering their development. Agribusiness is a key sector identified in this work, and access to finance for agribusiness small and medium-sized enterprises (SMEs) was identified as a major constraint hampering the sector's development. Within the frame of the CGS project, the OECD designed an instrument to guarantee a proportion of loans to agribusiness SMEs of 100-2000 hectares. The scheme was designed on the basis of a pilot covering four Oblasts (Cherkassy, Vinnytsia, Poltava, and Kharkiv), before being scaled up as results are revealed. This project was launched in September 2013 and concluded in February 2016. It was fully **financed by the Government of Sweden**.

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ACRONYMS AND ABBREVIATIONS

ALCO	Asset and liability committee
ALM	Asset/liability mismatch
CEO	Chief Executive Officer
CGS	Credit guarantee scheme
EUR	Euro (currency)
Ha	Hectare
IT	Information technology
LLC	Limited liability company
MIS	Management information system
NBFI	Non-bank financial institution
NBU	National Bank of Ukraine
OCP	Open currency position
SME	Small and medium-sized enterprise
UAH	Ukrainian hryvnia (currency)
USD	United States dollars

GLOSSARY

Additionality	<p>The additionality of a CGS is defined in two parts, one being the scheme's financial additionality and the other its economic additionality. Financial additionality refers to the increase in the volume of credit flowing towards viable SMEs as a result of the scheme. Specifically, it refers to guaranteed credit that would not have been provided without the guarantee, or more favourable credit conditions that emerge as a result of the guarantee (e.g. longer maturities or lower interest rates). Economic additionality describes the effect of increased access to finance on overall economic welfare. This is generally measured in terms of increased sales, employment, investment or innovation of the supported SME or, at the macro level, by increased competitiveness and growth.</p>
Adverse selection	<p>Adverse selection is an economic concept which denotes a situation where buyers and sellers of goods or services have different levels of information, leading to a 'rigged' trade.</p>
Agribusiness	<p>Agribusiness represents a comprehensive value chain that covers all aspects of agricultural production (e.g. farming, seed and other agricultural inputs, crop production, post-harvest handling, and animal husbandry), processing, and distribution (e.g. wholesaling, retail sales to final consumers) (FAO, 2010; OECD, 2008).</p>
Agricultural SMEs	<p>In this report, agricultural small and medium-sized enterprises (SMEs) refer to enterprises farming 100-2000 hectares of land.</p>
Call option	<p>An option to <i>buy</i> assets at an agreed price on or before a particular date.</p>
Counter-guarantee	<p>A counter-guarantee is a form of back-to-back guarantee given to a CGS by either the state or international organisations, in exchange for a fee, to cover a portion of the potential losses when guarantees are paid out. It is as a supplementary risk-sharing mechanism.</p>
Farmers	<p>In this report, "farmers" refers to land-based agricultural SMEs.</p>
Leverage ratio	<p>Leverage ratio refers to the "multiplier effect" – the size of the scheme's guarantee portfolio relative to the size of its fund.</p>
Moral hazard	<p>Moral hazard describes a situation in which agents do not bear the full cost of their actions and are thus more likely to take such actions. It is particularly an issue when a party undertakes a risky action knowing that it is protected against the risk and that others will share/bear the cost.</p>

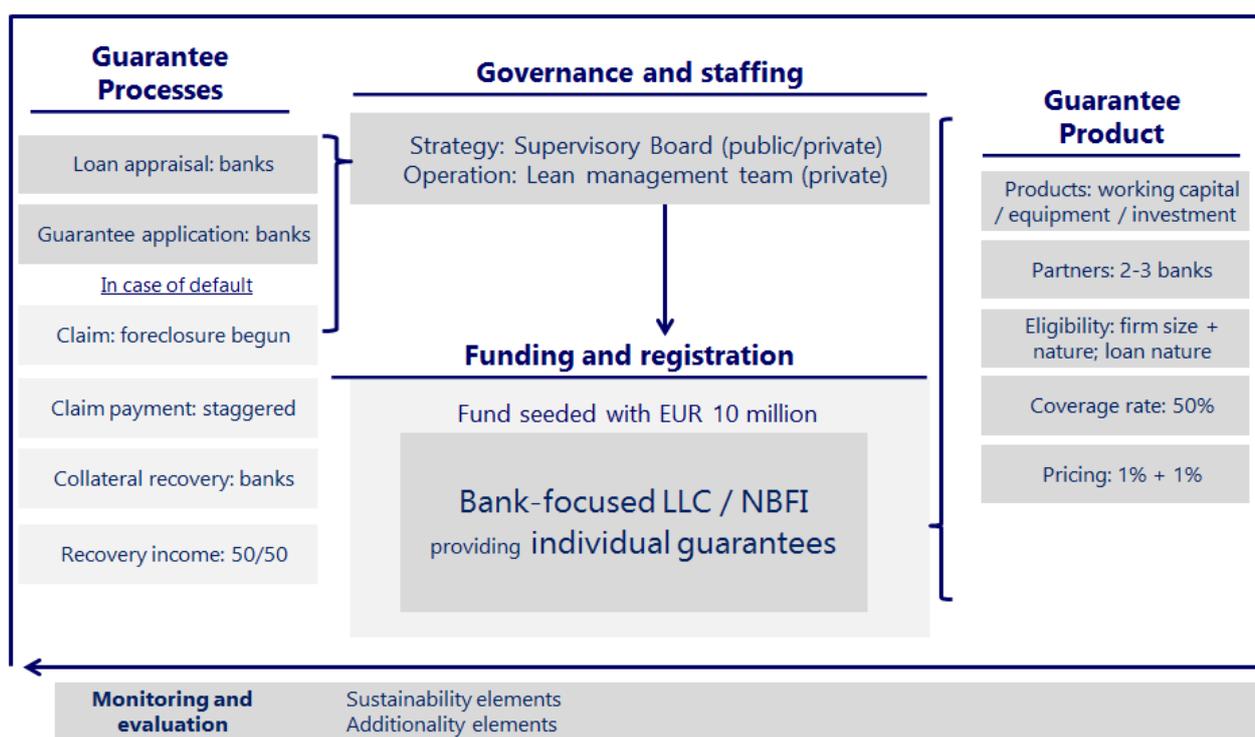
<i>Pari passu</i> basis	<i>Pari passu</i> refers to loans, bonds or classes of shares that have equal rights of payment, or equal seniority.
Primary features	In this report, primary features are defined as those aspects which constitute the basic concept of the CGS. Broadly, they are the policy decisions – here, they are taken as mission, target and type of CGS.
Put option	An option to <i>sell</i> assets at an agreed price on or before a particular date.
Secondary features	In this report, secondary features are defined as all other design features of the CGS. These include coverage rate, pricing, legal form and procedures for guarantee application and claims payout. They are defined based on the specific institutional and market environment, international best practice, and projections of the financial model.
Small and medium-sized enterprises (SMEs)	In 2012, the State Statistics Service of Ukraine started to classify small- and medium-sized enterprises (SMEs) largely in-line with the EU definition – the exception being that it excludes a balance-sheet criterion. SMEs are now defined as enterprises with under 250 employees and generating under EUR 50 million in annual turnover.
Sustainability	Sustainability refers to the CGS's ability to cover its own costs whilst increasing leverage towards its target group. A scheme's sustainability will depend on its ability to encourage lender participation, so as to achieve a sufficient volume of credit.

EXECUTIVE SUMMARY

Within the frame of the project *Putting in Place the Conditions to Set up a Credit Guarantee Scheme for Agribusiness SMEs in Ukraine* (CGS project), the OECD is designing an instrument to guarantee a proportion of loans to agribusiness SMEs of 100-2 000 hectares. The scheme has been designed on the basis of a pilot project covering four Oblasts (Cherkassy, Vinnytsia, Poltava and Kharkiv), and will be scaled up as results emerge. Two reports have already been published and are available: the pre-feasibility study, which outlined the primary characteristics, or the “public policy” decisions, of the scheme; and the feasibility study, which led to the economic and financial viability of these features. These two reports also looked at the macro environment for the scheme – such as macroeconomic instability, the regulatory and legal framework, and the condition and selection of commercial banks.

This technical report presents a detailed set of recommended features and processes for setting up and operating the scheme. These features will be grouped around five key design issues: the guarantee product; the scheme’s funding and registration; the scheme’s governance and staffing; guarantee processes; and monitoring and evaluation (Figure 1).

Figure 1. Schematic of proposed credit guarantee scheme



Source: OECD analysis

Risk and how to deal with it are key considerations for the scheme. The report begins by outlining the most important risks for a Ukrainian CGS working in the agriculture sector and proposes a set of tools and procedures for mitigating such risks. The report also outlines the two most important objectives of a CGS – sustainability and additionality – and recommends procedures and a list of indicators for monitoring and evaluating them.

INTRODUCTION

The project’s pre-feasibility study defined the primary characteristics, or the “public policy” decisions, of the credit guarantee scheme (see Box 1), as well as a tool for identifying partner banks.

Box 1. Primary features of the recommended credit guarantee scheme

- **Mission:** the mission statement is the basis on which operational objectives will be set, and outlines the purpose and objectives of the scheme for all future communication with the scheme’s clients (namely, partner banks and potential investors). The mission statement for the CGS in Ukraine is: *“The Ukrainian Agribusiness Guarantee Scheme is an independent credit guarantee instrument that aims to support agricultural SMEs in rural areas and is working under the regulation of the National Bank of Ukraine or Natskomfinposlug. Its long term aim is to create a liquid credit market for bankable agribusiness SME projects that promote productivity growth in the sector.”*
- **Targeting:** it has been proposed that only land-based agricultural SMEs farming 100-2,000 hectares are targeted. Given that unmet credit demand for this target group would be too high to tackle for the entire country, it is also recommended that the CGS initially focuses on selected regions and then possibly scales up to other regions. The regions identified as suitable for this initial pilot phase of the scheme are Cherkassy, Kharkiv, Poltava and Vinnytsia. The rationale is that they make an important contribution to gross agricultural output, whilst receiving low access to loans and low state support.
- **Types:** it is proposed that the CGS in Ukraine is formed as a public/private entity, seeded by international donor funds, and will provide individual guarantees to banks.

Source: Pre-feasibility report (OECD, 2016)

The project’s feasibility study modelled the scheme’s economic and financial viability based on various assumptions. These assumptions included the proposed coverage rate, fees, delivery channel, the timing of the application, its capitalisation and legal form (see Table 1). This modelling exercise suggested that a credit guarantee scheme could reach sufficient scale if its implementation were accompanied by a package of complementary reforms as those described in the pre-feasibility report, which could decrease the market, operational and credit risks of operating in the country.

Table 1. Assumptions of financial modelling exercise

Coverage rate	Fees	Timing	Capitalisation	Legal form
50%	1% ¹	Ex post	EUR10mn+ EUR 1.5mn	Limited liability company

¹ Both upfront (of the loan principal) and annual (of the guaranteed amount). As indicated in this report’s executive summary, the annual rate has been adjusted to 2%, following the development of a pricing model, in order to increase sustainability.

This technical report presents a comprehensive set of recommendations for a CGS that targets agricultural SMEs in Ukraine. First, the scheme’s risk exposures and proposed mitigation measures will be outlined, followed by four sets of recommended secondary design features. To conclude, recommendations are made for mechanisms for monitoring and evaluating the scheme’s additionality and sustainability.

These recommendations were presented and discussed at the project's Fifth and Sixth Task Force meetings held respectively in October 2015 and February 2016 in Kyiv. Members of the Task Force, including representatives of the government and the National Bank of Ukraine (NBU), provided feedback on the analysis conducted, and validated the project's proposals. Additional training in the recommendations (and how to operate the scheme) was provided by the OECD between the 22nd and 26th of February 2016 to representatives of NBU, *Natskomfinposlug*, government bodies and commercial banks.

1. RISK MANAGEMENT

The principal economic rationale for the use of credit guarantee schemes is as an instrument to share the risk of lending with a particular group of clients. However this arrangement makes it particularly important that a Ukrainian CGS manages risk effectively – both in its design features as well as throughout its operational lifecycle. This is because not only is it exposed to the typical risks facing any financial institution, but it also faces additional credit risks of lending to a riskier segment of clients, combined with the risk of additional moral hazard involved when a third counterparty enters a loan agreement. There are also high risks involved with operating such a scheme in Ukraine.

For these reasons, as well as the feasibility study's recommendation that it operates as a very lean structure, it has been proposed that this CGS focuses on risk management as a core competency, and delegates all "front office" functions to its partner banks. This focus on risk will be an integral element of the CGS design, and a comprehensive set of risk management tools and processes are outlined in this report. This chapter will introduce the scheme's risk exposure and mitigation tools; continuous mechanisms for ensuring the scheme's sustainability will be described in the report's final chapter on monitoring and evaluation – placing sustainability as the core objective of the CGS alongside additionality¹. Various secondary features of the scheme have also been designed with risk mitigation in mind, and these will be explained where relevant.

1.1 Risk exposure

An overview of the various risks facing a CGS is presented below. Of these, the CGS is responsible for mitigating operational, liquidity, market and counterparty risks. Credit risk is also significant for a CGS, though it has been proposed that in order to allow for a rational division of labour and lower administrative costs, the CGS's partner banks will be principally responsible for mitigating credit risks. They will also be held more liable in the event of default (for instance being responsible for collateral recovery and having their performance measured for future guarantees).

1.1.1 Credit risk

Credit risk is the risk of default if the borrower is unable to make his or her required loan repayments. The scheme's credit risk will be shared with partner banks. Each partner bank will be responsible for mitigating the majority of the credit risk on its guaranteed portfolio. The CGS's role in credit risk mitigation will be restricted to monitoring the performance of its portfolio and diversifying as much as possible, limiting its risk exposure to individual clients through relatively a low coverage rate, and screening its partner bank's credit appraisal procedures.

There are a number of sector-specific risks related to financing primary agricultural activities, particularly in Ukraine (Table 2); these risks are one of the principal reasons for the low level of credit flowing to the sector. Where loan contracts are involved, counterparty risk (between the credit provider and the borrower) is also high, principally on account of the low level of formality of agricultural enterprises in Ukraine.

¹ As discussed in the project's pre-feasibility report, the main indicator of a successful CGS is the degree of additionality it can achieve whilst retaining its sustainability.

Table 2. Risks involved with financing agriculture in Ukraine

Risk	Description	Level
Production	High variability of production	
Market/price	Price of the harvest's output is typically not known	
Financial	Can be low capacity and /or willingness to repay loan	
Counterparty	High degree of informality, low financial literacy, weak institutions, little collateral	
Political	This is a strategic sector, thus prone to political interference	

Source: IPC analysis

These risks can broadly be described as follows:

- **Production risk** is the principal risk for agricultural finance. This is due to the generally high level of variability in yields of primary crops – caused for instance by poor weather, poor production technologies, crop disease, and so on. This can reduce or eradicate farmers' ability to service their debt obligations; if enough farmers are affected, this can lead to “systemic” risks and widespread defaults. This risk can normally be mitigated through insurance products; however in Ukraine the general insurance market and the agricultural insurance market are both underdeveloped.²
- **Market/price risk** refers to the fact that market prices for agricultural goods, particularly in Ukraine, are highly variable, rendering it difficult to determine in advance the ability of a borrower to repay his/her loan. This risk predominantly falls on the individual borrower, but financial institutions that support a large group of borrowers engaged in this same activity are also exposed.
- **Financial risk** refers to the borrowers' capacity to repay the loan, and includes both the viability of the business and the borrower's willingness to pay. For the CGS, this refers to the risk that the borrower will not repay the partner bank. Specific issues arising from the macroeconomic environment in Ukraine will be particularly important here – for instance its history of highly volatile inflation. Annual consumer price index (CPI) inflation has averaged just under 11% since the turn of the century, but has fluctuated widely, from less than 1% in the lowest years to more than 25% in the highest. Sharp changes in inflation during the term of a loan can dramatically

² Until 2000 agricultural insurance was mainly delivered through Oranta, the successor of the Soviet-era insurer GosStrakh. The relevance of Oranta's products and industrial structure has declined with the country's economic transformation, however, and private players have failed to fill the gap. Neither farmers nor lending institutions consider insurance a reliable risk mitigation instrument in Ukraine (farmers tend not to trust insurance companies), and estimates by the International Finance Corporation (IFC) suggest that between 2005 and 2009 only 3% of the total seeding area in Ukraine was covered by insurance. For further information, see Business and Finance Consulting (2012).

affect the real interest rate and thus the likelihood of repayment. Moreover, inflation volatility gives lenders an incentive to be very cautious when determining interest rates.

- **Counterparty risk** refers to the fact that there is a high degree of risk associated with having farmers as counterparties, given their often high level of operational informality, low level of education and financial literacy, asymmetric information concerning markets and technologies, the poor legal environment and so on.
- **Political risk** is the possibility of political interference in the operation of the financial institution given its perceived strategic value.

It will be important for partner banks to invest in technology and training to screen clients for these risks, since many are specific to the sector and thus will require a degree of specialisation. Poor performance in mitigating credit risk might result in a high volume of defaulted loans, late repayments, low added value (for instance insignificant improvement of credit conditions), and/or a low level of recovery income.

1.1.2 Counterparty risk

Counterparty risk is a sub-class of credit risk, but in this analysis is treated separately, since a credit guarantee requires three counterparties rather than the usual two. The previous section has dealt with counterparty risk from the point of view of the risk associated with the borrower (i.e. farmer). In this section it refers specifically to risk originating from the credit provider (i.e. partner banks) and includes:

- **Operational risk:** the risk that the partner bank's internal systems may fail, resulting in an unsuitable loan being made. These systems primarily include the bank's policy on credit underwriting as well as its ability to control fraud, corruption and other risks related to internal control. Bankruptcy and liquidation of the partner bank are other risks to be faced by the CGS.
- **Market risk:** the risk that banks will approach the target market (agricultural SMEs in this case) with inappropriately-structured or inadequately-priced loan products that will not be attractive to borrowers.
- **Financial risk:** the risk that banks will make incorrect assessments of borrowers' ability or willingness to repay the loan.
- **Moral hazard**, which can arise if the provision of credit guarantees results in less rigorous credit appraisal, collateral assessment and collateral recovery than normal given the fact that the loss will not be fully borne by the bank itself. The scheme could be particularly vulnerable to moral hazard if its functional currency is euros and it commits to pay a guarantee at 50% of the euro value of the loan at the time of signing the loan contract. If a loan is denominated in Ukrainian hryvnia (UAH) and the UAH depreciates, this may increase the value of guarantee payment over loan repayment by the borrower. This in turn may decrease incentives for a bank to conduct proper credit appraisal or to attempt thorough collection efforts in the event of default.

The impact of poor counterparty performance might include a high volume of defaulted loans, late repayments, low additionality (for instance insignificant improvement of credit conditions), and/or a low level of recovery income.

1.1.3 Operational risk

Operational risk is the risk of a change in value caused by the fact that *actual* losses incurred as a result of inadequate or failed internal processes, people and systems, or external events (including legal risk), differ from the *expected* losses. It is different to other types of risk in that it is usually not willingly incurred, nor is it revenue driven. Sub-classes of operational risk, which also may affect the scheme, include:

- **Country risk:** the risk of possible changes in the business environment, such as the implementation of unanticipated currency controls.
- **Legal risk:** the risk that Ukrainian legislation may change, with an adverse effect on the dynamics of the scheme.
- **Political risk:** the risk that political decisions or events in Ukraine may adversely affect the dynamics and profitability of the CGS. Such risks could be heightened during the instalment of a new government or by social instability.
- **Regulatory risk:** the risk that the scheme will not meet the requirements of regulatory bodies in Ukraine, or that – for unknown reasons – these bodies will impose arbitrary rules on the CGS that force it to operate in a way that is not in accordance with its mission.

Poor performance in mitigating operational risk could affect the viability of the scheme as a whole. It could result in the interest-driven allocation of guarantees or the breakdown of systems, and/or render the scheme unable to operate as an institution.

1.1.4 Liquidity risk

Liquidity risk specifically refers to funding liquidity here. It is the risk that the CGS experiences a fund shortage or an asset/liability mismatch that renders it unable to meet its liabilities when they fall due – most importantly, the guarantee claims of partner banks. Liquidity shortfalls could arise from inadequate provisioning, illiquid investment of funds, and/or a higher-than-expected number of guarantee claims.

Poor performance in mitigating liquidity risk could leave the CGS unable to service its payment obligations – within the agreed time period or permanently. This could damage the reputation of the scheme, reducing its bargaining power with partner banks, as well as the value of guarantees for provisioning purposes. The best banks may be unwilling to participate in such a scheme.

1.1.5 Market risk

Market risk is the risk of losses in the value of an investment due to movements in market prices. Two sub-classes of market risk are particularly relevant to a donor-funded CGS in Ukraine:

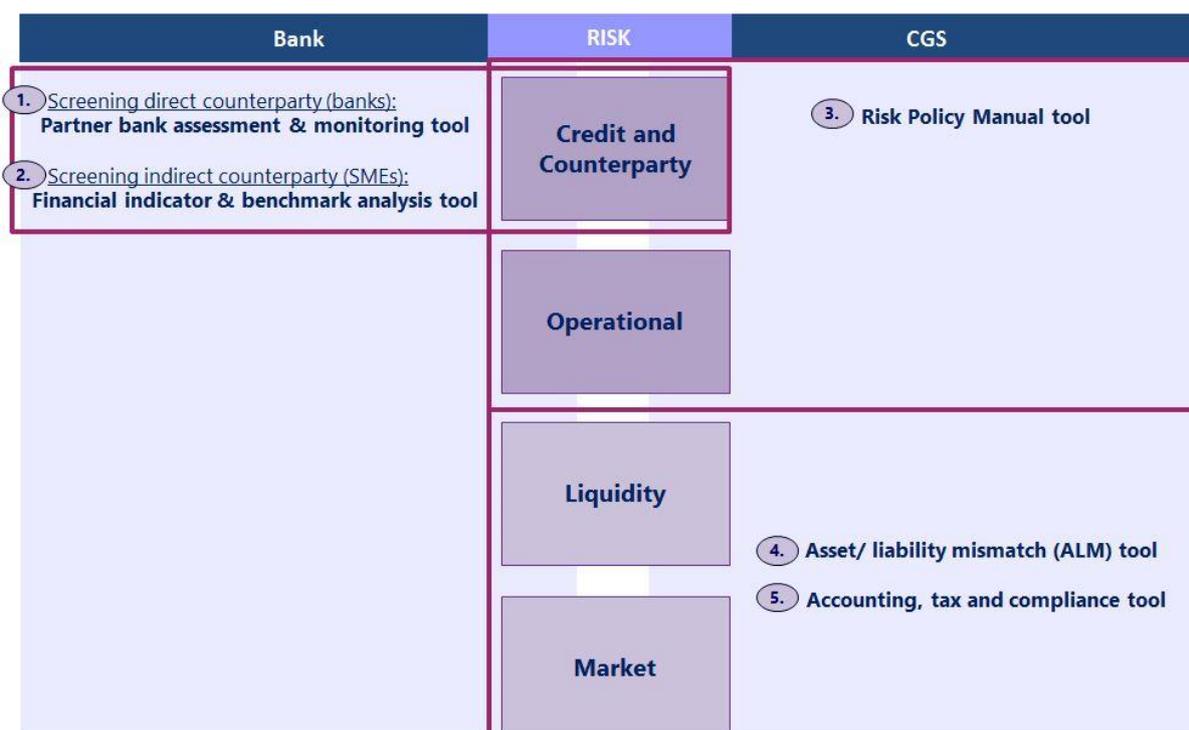
- **Foreign currency risk:** potential balance sheet losses due to exchange rate fluctuations, altering the value of the scheme's assets or liabilities.
- **Interest rate risk:** where a maturity mismatch between assets and liabilities results in a vulnerability to changes in interest rates, reducing CGS earnings.

Poor performance in mitigating market risk could result in the erosion of asset value and a decline in profitability.

1.2 Risk mitigation

Strong risk management could be a competitive advantage for the CGS, particularly given Ukraine’s volatile lending conditions. Furthermore, strong risk management is also essential for securing benefits in terms of reputation, credit rating, cost of funds, capital allocation, and pricing, all of which will facilitate the decision by partner banks and investors to support the scheme. In order to ensure effective mitigation of the risks described in the previous section, a set of five tools has been developed which should form the core of the scheme’s risk management strategy (Figure 2).

Figure 2. Overview of CGS risk management tools



Source: OECD, 6th Task Force Meeting (February 2016)

It is proposed that the majority of tools outlined here should be Microsoft Excel-based for the first one or two years of operation (with the exception of the accounting and compliance tool, which will be acquired on the Ukrainian software market), until the CGS has generated sufficient business volume to justify the development of stand-alone software. However, whilst the acquisition and implementation of these tools will enable the CGS to launch its operations within a strong management framework, it is important to highlight that the mere existence and use of these tools does not mean that the CGS will successfully avoid all risk. *Experienced and knowledgeable experts will need to be hired* by the CGS to continually assess the risks and to manage the loan guarantee process using these tools (Section 4).

1.2.1 Mitigating credit and counterparty risk

The majority of credit risks should be mitigated by the scheme’s partner banks. They will be responsible for conducting “front office” activities for the CGS, such as client screening and credit appraisal. They will also face the highest risk exposure in event of default: partner banks are expected to cover the costs of collateral recovery, and since the guarantee covers the loan principal but not expected interest, partner banks will forego interest payments should the borrower not repay his or her loan.

Nevertheless, it is anticipated that the CGS must also mitigate credit risk to some extent. Thus, various features to mitigate credit risk have been incorporated into the scheme's design, such as low coverage rate and risk-adjusted fees. In addition, two tools are proposed for screening the scheme's two counterparties: (1) a partner bank assessment and monitoring tool (to assess the risk management procedures of partner banks); and (2) a financial indicator and benchmark analysis tool (to assess the capital adequacy and payment history of guaranteed borrowers).

Mitigation tool 1: Partner bank assessment and monitoring tool

This tool is designed to mitigate credit risk transferred to the scheme from its counterparty, the crediting bank. The tool could be used to assess the business model, staffing, and credit allocation procedures of each partner bank, to ensure that they are fit-for-task and will not expose the scheme to unsustainable and preventable levels of credit risk. It is envisaged that the assessment would be run as the final due diligence check when contracting a partner bank, and also run regularly (perhaps in a more synthetic form) to check that compliance with these criteria is maintained, as well as to pre-warn the CGS of any imminent risks. This tool is outlined in further detail in Section 2.2 and illustrated in Table 6.

Mitigation tool 2: Financial assessment and benchmarking tool

This financial assessment and benchmarking tool has been designed to cross-check the borrowers that will be guaranteed and to ensure that the loan can be guaranteed in the framework of the scheme's existing portfolio. The scheme's guarantee officer (see Section 4) would first screen the borrower for compliance with the scheme's eligibility criteria. If the client is deemed eligible, the officer would then conduct a summary assessment of the borrower's financials. The tool is a verification mechanism only, and the scheme's guarantee officer would conduct the assessment based on information provided by the crediting bank.

This assessment involves two components: (1) a key financial indicators check (to address production and market risk); and (2) a risk analysis using quantitative indicators (Table 3) and qualitative indicators (Table 4). Both risk analyses are designed to identify financial and counterparty risk. The first component comprises a quick check of the client's (borrower) projected revenue over the loan's maturity, expected net profit after taxes over that period, and the growth of the client's revenue relative to the previous year. In addition to this, the CGS guarantee officer will draw up an estimation of the firm's assets and liabilities, as well as the details of the loan agreement (amount, term, frequency of instalments, and value of pledged collateral). In addition, other loan commitments will be factored in.

The second component comprises various financial ratios against which to assess the client. These indicators aim to elucidate the client's creditworthiness by looking at credit history, collateralisable asset possession, business experience, expected turnover, revenue growth and assets in relation to short-term and total liabilities, as well as the value of loan instalments. These indicators are calculated (where quantitative) or graded, and scores weighted according to their importance.³ An indicative depiction of how this exercise would look is shown in Tables 3 and 4. The client must receive a weighted score of over 0.60 on these indicators in order to receive a loan. This will award him/her with a "B" rating by the CGS; for an "A" rating he/she must receive a score of over 0.80.

³ Based on a judgemental assessment of their importance for the scheme.

Table 3. Financial assessment and benchmarking tool: risk analysis (quantitative indicators)

Quantitative analysis	No	Financial ratios	Weighted	Calculation (formula)	Options	Points	Result	Score
	1	Current ratio	5%	Current assets/ short-term liabilities	≥1	1	2.58	0.05
					<1	0		
	2a	Turnover coverage ratio	25%	Turnover/loan(s) instalments	≥3	1	4.79	0.25
					<3	0		
	2b	Profit coverage ratio	25%	Net profit/loan(s) instalments	<1	0	0.75	0.00
					≥1 & <1,2	0.3		
					≥1,2 & <1,5	0.8		
	3	Equity share	10%	(Total assets - total liabilities) / total assets	<0,5	0	0.38	0.00
					≥0,5	1		
≥1,5					1			
4	Ratio of equity to loan amount	10%	(Total assets - total liabilities) / Loan	<1	0	2.02	0.10	
				≥1	1			
5	Collateral coverage ratio	5%	Collateral value / loan amount	≥0 & <0,5	0	0.53	0.04	
				≥0,5 & <1	0.8			
				>1	1			
6	Growth of revenue	15%	(Revenues P1 / revenues P2) - 1	≥0	1	0.10	0.15	
				> -0,25 & <0	0.5			
				≤ -0,25	0			
Subtotal (max. 70% = 0.70)			70%				0.59	

Table 4. Financial assessment and benchmarking tool: risk analysis (qualitative indicators)

Qualitative analysis	No	Indicator	Weighted	Options	Points	Result	Score
	1	Does the client/ principal owner of business own property other than those provided as collateral?	5%	Real estate (including non-agricultural land), vehicles, production equipment	1	0	0.00
				No other property	0		
	2	Credit history	10%	overdue 0-7 days / has never had delay	1	0.8	0.08
				overdue 8-30 days	0.8		
				overdue 31-90 days	0.5		
				overdue 91-180 days	0.1		
				overdue over 180 days	0		
	3	Business experience	10%	over 5 years	1	0.3	0.03
				3-5 years	0.6		

			1-3 years	0.3		
4	Age of the client	5%	24-55 years	1	0.5	0.03
			56-65 years	0.8		
			up to 24 years and over 65 years	0.5		
			Subtotal (max. 30% = 0,30)	30%		
Total (max. 100% = 1,00)		100%				0.73

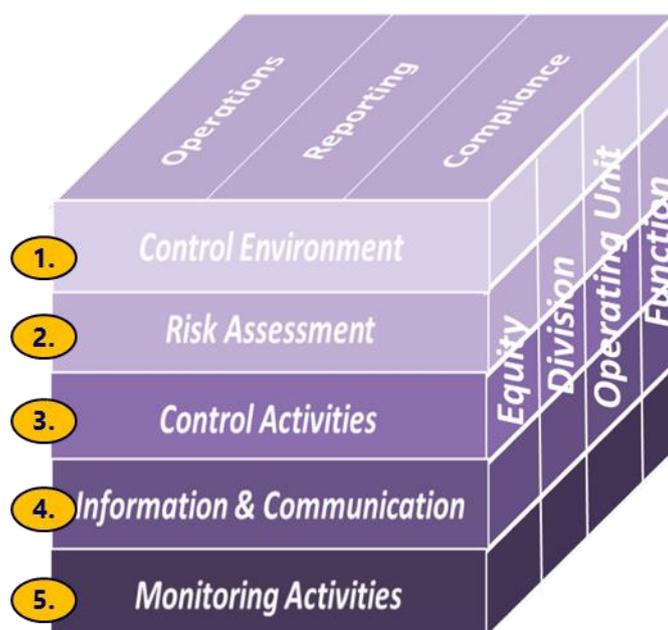
1.2.2 Mitigating operational risk

Hiring technically-proficient, professional, ethical staff, implementing adequate information systems, and conducting thorough due diligence should go some way towards mitigating operational risk. In addition, it is proposed that the architects of the scheme implement a system for internal control such as the COSO framework (see below), and follow the recommendations of the project’s Risk Policy Manual (see Annex 2) in day-to-day operations.

Mitigation tool 1: COSO framework

It is recommended that in order to mitigate operational risks, an internal control framework should be implemented that permeates all activities of the CGS. The internal control framework recommended for this task is the COSO model, which is a standardised framework against which companies and organisations can assess their control systems. The framework has five components, summarised in Figure 3 and below. These components are relevant to any financial institution.

Figure 3. Illustration of the COSO framework



- 1) **Control environment:** sets the “tone at the top”, demonstrating an institution’s commitment to integrity and ethical values. Specific features include a board of directors that is independent from management and that oversees internal control performance throughout the institution; and commitment to attracting, developing and retaining competent staff who are also held

accountable for their internal control responsibilities in the pursuit of the organisation's objectives.

- 2) **Risk assessment:** clear objectives have been specified and risks to the achievement of these objectives have been identified. Appropriate risk management techniques have been developed, and the institution identifies and assesses changes that could affect the internal control system as well as considering the potential for fraud.
- 3) **Control activities:** the institution develops control activities that contribute to the mitigation of risks, enabling the institution to operate effectively in line with its risk tolerance. These control activities are carried out through policies and procedures, for instance having clear criteria for guarantee eligibility and *ex-ante* or *ex-post* oversight of guarantee allocation.
- 4) **Information and communication:** the institution uses relevant quality information to support the internal control function. It also communicates information internally, including objectives and responsibilities for internal control; and communicates with external parties regarding internal control matters. Thus, the CGS must have robust IT solutions for collecting, analysing and presenting information about the risks facing the institution, enabling management to make informed, timely decisions for supporting internal control.
- 5) **Monitoring activities:** the institution carries out ongoing or separate evaluations to determine whether the components of internal control are functioning as expected. Internal control deficiencies are assessed and communicated in a timely manner to those parties responsible for carrying out corrective actions, including senior management and the board of directors, as necessary. In the case of the CGS, IT systems should be in place to monitor the performance of each guarantee as well as its impact, based on additionality indicators (see Section 6).

The COSO framework outlines an institutional approach and systematic methodology to enforce correct controls for the CGS. It is supplemented by the Risk Policy Manual (see below) and other technical tools that will be provided to the Task Force to assist the nascent CGS in addressing operational risks. The organisational structures responsible for implementing COSO will be defined in Section 4 on governance.

Mitigation tool 2: Risk policy manual

Another tool to mitigate operational risk will be the scheme's Risk Policy Manual (cf. Annex 2). This document is designed to guide the scheme's managerial staff in implementing thorough and comprehensive risk management procedures. The manual proposes an operational risk framework comprised of the following: governance and organisation; identification and assessment; monitoring and reporting; controls; and business resilience and continuity. Recommended tools for identification and assessment include: internal loss data collection and analysis; external data collection and analysis; risk and control self-assessments; business process mapping; risk and performance indicators; scenario analysis; capital estimate; and comparative analysis. Recommended risk reports in the component on monitoring and reporting include: breaches of the CGS's risk appetite and tolerance statement; details of recent significant internal operational risk events and losses; and relevant external events and any potential impact on the CGS and its operational risk capital.

Mitigation tool 3: Accounting, tax and compliance tool

All systems, accounts and documents should be aligned with Ukrainian regulatory standards. This tool involves a management information system (MIS) which would be used to monitor and assess compliance with Ukrainian tax reporting, financial reporting, liquidity, and cash management requirements for financial services. It is estimated that the cost of the Accounting, Tax and Compliance tool would be

approximately EUR 15 000 to 25 000, and that it should be acquired on the Ukrainian software market through a public tender. Sample terms of reference (ToR) for this tender are included as Annex 3.

1.2.3 Mitigating liquidity risk

The scheme will need to carefully monitor its liabilities and ensure that sufficient assets are available to cover them. This will involve ensuring that total assets can cover total expected liabilities (for instance by conducting a thorough analysis when setting the scheme's leverage targets), and that expected liabilities can be covered by liquid assets (which should be considered whilst deciding where to invest funds). Two tools have been proposed to promote the fulfilment of these objectives: an asset/liability mismatch (ALM) tool; and an accounting, tax and compliance tool.

Mitigation tool 1: Asset/ Liability Mismatch (ALM) tool

It is recommended that an Excel-based ALM tool is developed to provide a framework for the identification and mitigation of risks related to mismatches between assets and liabilities. The tool allows for the identification of gaps and margins (%) between assets and liabilities, as well as ratio analysis (including liquidity ratios, open currency position ratios, capital adequacy ratios and guarantee portfolio ratios), in the different currencies used by the scheme and as a whole. It is recommended that the scheme's performance on this metric is monitored and discussed regularly by an asset and liability committee (ALCO; see Section 4.3.1). A sample of the AML tool is included as Annex 4 and its use for mitigating foreign exchange (F/X) risk is explained below.

Mitigation tool 2: Accounting, tax and compliance tool

It is recommended that one of the components of the accounting, tax and compliance tool described above should be a cash analysis solution, including a liquidity analyser and a portfolio analyser.

1.2.4 Mitigating market risk

The mitigation of market risk will be complicated given the volatile macroeconomic environment in the country, and the fact that the donors' functional currency is likely to be different to the currency used for guaranteed loans.⁴ Part of the mitigation approach will rest on key design features, such as deciding where the scheme's funds will be held. However, it is recommended that the ALM tool and the accounting, tax and compliance tool mentioned above are also used to mitigate market risk, particularly foreign currency risk, as follows.

Mitigation tool 1: ALM tool

The ALM tool could be used to monitor the open currency position (OCP) of the CGS. This denotes the difference between all assets and all liabilities in each currency possessed by the scheme. The OCP must be expressed in consolidated form, with any indexed positions counted in the currency to which they are indexed. The OCP can be either positive (long) when the assets in one currency are larger than the liabilities in this currency, or negative (short), when the liabilities are larger than the assets. The total currency position of the CGS is the sum of the absolute value of all long and short positions in all foreign currencies – for instance in Ukrainian hryvnia (UAH) and United States dollars (USD), if the euro is selected as the CGS's functional currency.

⁴ Currently small and medium-sized enterprises are only permitted to bank loans in foreign currency if they export.

It is recommended that the open currency limits of the scheme are monitored and set quarterly by the supervisory board of the CGS – both individually per currency and for total OCP. Monitoring of the OCP could be carried out on a daily basis by the CGS deputy general manager, who would be responsible for financial risk management (see Section 4). Finally, it is suggested that the ALCO meets weekly to decide on the use of financial instruments to maintain the OCP within given limits. In addition, the ALCO could be free to set stricter limits than those approved by the supervisory board, if indicated. This ALM tool could serve as a starting point for the CGS to identify, discuss and operationally manage the currency position of the CGS as described.

Mitigation tool 2: Accounting, tax and compliance tool

It is recommended that one of the components of the accounting, tax and compliance tool described above would be a cash analysis solution, including an F/X risk analyser and a portfolio analyser.

2. SECONDARY CHARACTERISTICS: GUARANTEE PRODUCT

2.1 Guaranteed products

The suggested (lean) product range described in Table 5 implies that the CGS should focus, at least initially, on covering the basic working capital and investment financing needs of agricultural SMEs. Commercial banks traditionally offer credit lines – in the form of bullet loans, instalment loans⁵ or a combination thereof – to help SMEs efficiently manage working capital and investment-related cash flow (in addition, overdrafts can be used to manage short-term liquidity gaps).

Table 5. Proposed guarantee products

Type	Maturity	Guarantee size
Guarantee product 1 – Production: working capital - input materials, small machinery: seed drills, combines, etc.	8-10 months average	EUR 20 000 - 60 000
Guarantee product 2 – Equipment: purchase of light trucks, trailers, transportation equipment, etc.	18-20 months average	EUR 60 000 - 120 000
Guarantee product 3 – Investment: investment capital - machinery: seed drills, combines, land, etc.	36 months average	EUR 80 000 - 250 000 (exceptionally <EUR 500 000)

Accordingly, it is recommended that any of these loan types should be eligible for CGS guarantee coverage, and that the scheme’s managers should take a rather flexible view when negotiating with potential partner banks on what type of loan contracts should qualify for a guarantee. This is because loan product design varies considerably from bank to bank and tends to change over time. It would not be reasonable to exclude in advance any type of loan contract from being eligible for a guarantee. As long as the type of loan contract adequately addresses the financing needs of the target group and does not expose the bank and/or the CGS to unusual legal risks, it should be considered eligible for guarantee coverage.

The recommendation to focus on basic working capital and investment loans is also supported by a recent survey of CGS in Central, Eastern and South-Eastern Europe (CESEE) countries conducted by the Vienna Initiative Working Group on Credit Guarantee Schemes (EBCI, 2014). This shows that the vast majority of schemes provide guarantee products for financing working capital (94% of all schemes) and investment loans (89%). In contrast, other guarantee products – including leasing-related guarantees (42%) as well as guarantees for overdraft facilities (37%), bridge financing (26%) and trade finance (21%) – play a less significant role.

To fully understand the menu of loan products currently available for agricultural SMEs, a survey of nine banks identified as potential partners of a Ukrainian CGS was conducted in July 2015. It found that 88% of surveyed banks offered the target group working capital loans (i.e. production) and 78% offered short-term investment loans (i.e. equipment); investment loans were less common – only 22% of banks offered investment loans to the target group.

⁵ A bullet loan is a loan where the entire principal of the loan, and sometimes the principal and interest, is due at the end of the loan term. An instalment loan is a loan that is paid back with a number of scheduled payments.

Based on this research, additional guarantee product specifications related to the maturity of the loan can already be proposed at this stage. Indeed, since the time to maturity of a loan is directly linked to its risk exposure (i.e. the longer the loan maturity the larger the underlying risk) it is suggested that the CGS initially limit its guarantee maturities as follows: five years for larger investment loans, thirty-six months for equipment loans, and eighteen months for working capital. These terms would bring the CGS largely in line with Ukrainian banks' current risk assessments of the maximum acceptable maturities for agricultural SME loans.

It is recommended that CGS management review the loan product market and adjust the product range at least once a year, taking into account the SMEs' financing needs, the adequacy of the loan product design and possible risk implications.

2.2 Partners

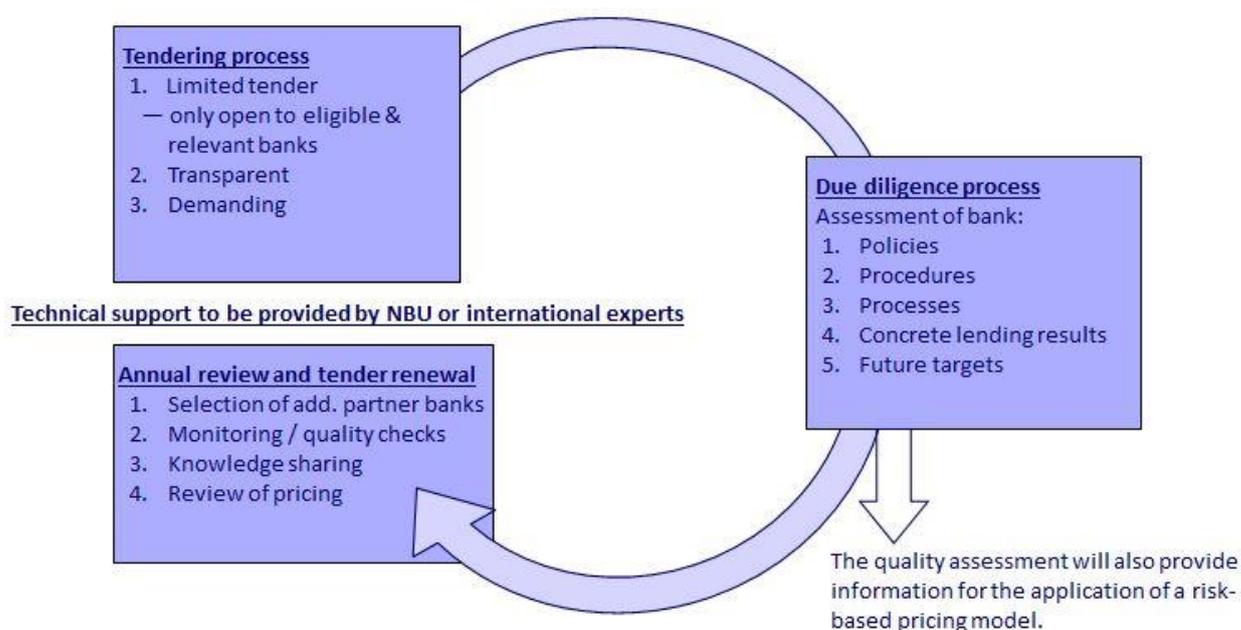
As outlined in this project's pre-feasibility study, it is proposed that this scheme initially partners with two or three banks selected through a competitive process. The recommended criteria for selecting these banks have been outlined and explained in this project's pre-feasibility study. This method, piloted from November 2014 to January 2015, involved two steps:

Step 1: Initial screening (eligibility check) → reduced 43 banks to 17 banks

Step 2: Pre-selection (relevance check) → reduced 17 banks to 10 banks

In Step 1, commercial banks operating in Ukraine were assessed on their strategy, activities, products, presence, relevance, quality, credit rating and recent portfolio developments, as well as "negative" criteria such as related-party lending. Step 2 involved interviewing and surveying the selected banks to assess their interest in participating in a CGS and their experience of lending to agricultural SMEs. These two processes resulted in a final pool of ten commercial banks operating in Ukraine. Given Ukraine's current macroeconomic instability and the shakiness of its banking sector, this process should be repeated by the scheme's founding investors prior to implementation, along with a final step involving a due diligence check (Figure 4).

Figure 4. Due diligence/quality assessment of partner banks



This step will involve launching a tender process for the pre-selected banks, and then subjecting all applicant banks to a thorough due diligence process. This process would include the implementation of the partner bank assessment and monitoring tool (see Section 1.2.1). This tool consists of a formal scoring matrix covering four hundred and eighteen questions in nine key categories of bank operations, focusing on the credit methodologies, human resources (HR) and business model, as well as the MIS processes of the potential partner (Table 6). Each category presents a list of questions that must be answered by the bank during the interview process. Their answers are scored in accordance with their importance for implementation of best practice lending methods, policies and procedures, loan officer training and experience, and so on. It is expected that these checks would take place over a period of three to four days and would cover in exhaustive detail both the “paper” (whether written policies exist) and “practice” (whether these policies are actually implemented) activities of the bank.

Table 6. Partner bank assessment and monitoring tool

Scoring category	Paper	Practice	Paper	Practice	Bank score	Pass
Credit - Marketing & selection	12	20	6.5%	9.9%	72%	YES
Credit - Application processing	23	23	12.5%	11.3%	76%	YES
Credit - Prequalification	17	17	9.2%	8.4%	82%	YES
Credit - Underwriting	55	55	29.9%	27.1%	93%	YES
Credit - Closing & funding	24	24	13.0%	11.8%	79%	YES
Credit - Monitoring	23	23	12.5%	11.3%	88%	YES
HR - Employee selection	23	16	12.5%	7.9%	94%	YES
Management - Business model	13	18	0.0%	0.0%	92%	YES
IT - MIS	7	25	3.8%	12.3%	89%	YES
Total	197	221	100.0%	100.0%	86.4%	YES

Applicants should score a minimum of 70% in each category in order to be selected for partnership with the CGS: this rate has been decided based on lending experience in Ukraine. This process should allow two to three banks to be selected. This number could increase as the scheme matures, providing that eligible candidates are available. The performance of these banks should be monitored and the tendering process renewed annually.

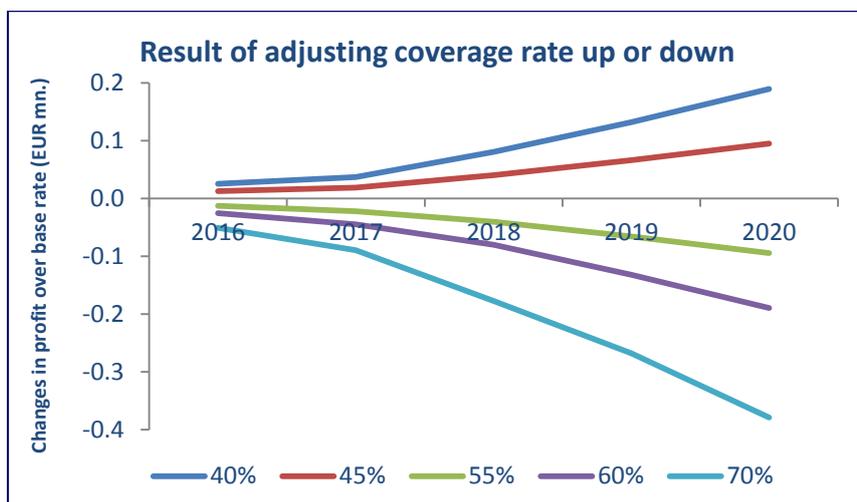
2.3 Coverage rate

The coverage rate denotes the share of the loan that is guaranteed, and therefore the breakdown of the risk assumed by the lender and the guarantor. As mentioned previously in this project’s feasibility study, the coverage rate should be high enough to encourage lender participation but low enough to limit moral hazard.

Across the OECD, coverage rates are typically above 50% but well below 100% (OECD, 2013; KPMG, 2011). However the vast majority of these schemes are public schemes, giving them a much greater ability to absorb larger loan losses. In the first year of operation, a coverage rate of 50% has been

recommended given the novelty of the scheme (and consequent lack of any history of guarantee performance), the condition of the financial sector in Ukraine, and the fact that the scheme’s portfolio will comprise loans to only one (risky) sector. To validate this decision, alternative coverage rates were explored using the project’s Financial Model (Annex 1) developed during the feasibility stage (Figure 5).

Figure 5. Effect of adjusting coverage rate on overall CGS profitability



The modelling results suggest that a downward adjustment to a coverage rate of 40% would add EUR 463 949 to the bottom line of the CGS over the initial five years of operation. An upward adjustment to a coverage rate of 70% would result in a loss of EUR 964 240 over the base case (of 50%), which as per the financial projections in the project’s feasibility study is almost 35% of the initial capital of the scheme. This suggests that whilst increasing loan guarantee coverage may have a beneficial impact on additionality and partner bank interest, the negative impact on sustainability makes such an adjustment untenable. A focus on CGS profitability may seem secondary to the project’s additionality goals, but it is vitally important for ensuring that the CGS can continue to achieve its goals over the long term. This is particularly pertinent in the absence of government subsidies to cover guarantee losses or operational costs.

As the scheme matures, it may be possible to adjust the coverage rate for specific groups that may still be overlooked by partner banks, providing that there is a strong business case for doing so and sustainability is assured. The coverage ratio for such groups could increase to 70%, but this should be accompanied by higher fees, reflecting the higher risk. The decision should be based on an analysis of the actual additionality of the initial coverage ratio, of the proposed target group and of the scheme’s financial projections to ensure that it is the correct instrument for increasing credit to this group and that it is sustainable.

2.4 Eligibility criteria

One of the first tasks in designing a credit guarantee scheme is to set its eligibility criteria. Doing so helps ensure that guarantees fulfil the scheme’s mandate. As general best practice, these criteria should not be overly restrictive, since criteria that are too restrictive can result in a portfolio that does not sufficiently diversify risk and thus a scheme that experiences very high default rates or is unable to achieve significant leverage (Green, 2003).

Most credit guarantee schemes surveyed in the OECD only limit guarantee access by firm size, which is generally determined by turnover but can also be determined by the number of employees, depending on the policy objectives. For instance the 7(a) Loan Program in the US determines firm size based on turnover

(except in manufacturing, where the threshold is based on the number of employees. Firms must have fewer than 500 employees to be eligible; Leone and Vento, 2012). Other common eligibility criteria include geographic location, sector and gender.

2.4.1 Recommendations for the CGS eligibility criteria

The scheme’s proposed mission statement recommends that guarantees are targeted at small firms (defined by land size, namely 100-2 000ha) in the agricultural sector. OECD analysis summarised in the project’s pre-feasibility report suggests that the scheme should first be piloted in the target regions of Cherkassy, Vinnytsia, Poltava and Kharkiv. However given the limited capital of the scheme and the high credit constraints of agricultural SMEs in Ukraine, it would be important to introduce more precise targeting.

Thus, a framework for eligibility assessment has been developed which adds the firm size classification of turnover as well as other criteria to ensure that the loan is used productively. These include the degree of the firm’s business experience, its credit history, and the purpose of the loan (Table 7). The criteria are broad, which ensures low transaction costs and attempts to limit distortion of the credit allocation process, yet the client must meet all in order to be eligible.

Table 7. Proposed eligibility criteria

#	Eligibility criteria (Yes/No)		Yes/No	Action
Firm size				
1	Land size	100-2 000 ha?	Yes	Proceed
2	Annual turnover	USD 30 000-USD 1 500 000	Yes	Proceed
Other firm characteristics				
3	Type of business	Agriculture more than 75% income?	Yes	Proceed
4	Age	At least two seasons/cycles old?	Yes	Proceed
5	Credit history	Negative check?	Yes	Proceed
6	Borrower location	Located in target regions?	Yes	Proceed
Nature of loan				
7	Loan maturity	5yrs or less (investment loan) or 1.5yrs or less (working capital loan)?	Yes	Proceed
8	Loan purpose	Business use?	Yes	Proceed

Firm size

The two firm size criteria (land size and annual turnover) have emerged from the findings of the project’s feasibility study. This found that the land size criterion of 100-2 000 hectares was relevant for producers of traditional and industrial crops, as well as livestock (at a ratio of 10 head to 1 hectare). For potential sectors such as fish farming, milk production, vegetable growing in greenhouses and/or open fields, however, a different methodology will be necessary. For rural enterprises that are not land-based, this factor will not be scored and firm size will only be based on annual turnover. The delineation of annual turnover is based on a calculation of standard turnover for two cultures: wheat (the most common standard culture); and sunflower. It is estimated that farmers cultivating 100 to 2 000 hectares of land could expect to receive sales of around USD 36 000 to USD 720 000 (wheat) or USD 71 400 to USD 1 428 000

(sunflower). Thus, an annual turnover of between USD 30 000 and USD 1 500 000 is included in the scheme's eligibility criteria.⁶

Other firm details

Additional eligibility criteria have been developed to control for the high risk and comparatively low level of formality of some farmers in the target segment.

First, eligible enterprises should derive 75% of their income from agriculture. This is based on current Ukrainian legislation and the tax code,⁷ which defines companies as active in the agricultural sector only if 75% of more of their total income comes from the sale of agricultural products or services.

Second, eligible enterprises should be at least two seasons/business cycles old – with longer business cycles for animal husbandry than crop production, for instance. This makes start-ups ineligible for guarantees.

Third, eligible enterprises should have a negative check for their credit history. This makes firms that have a bad history of loan repayment ineligible for guarantees.

Nature of the loan

Currently, the majority of SME farmers in Ukraine finance their business activity via retained earnings (i.e. savings). A survey of the scheme's proposed pilot regions conducted between January and April 2015 by the OECD among agribusiness SMEs showed that farmers with fewer than 500 ha tend to operate as family businesses, with the farmers' wives completing the farms' financial accounts and family members performing seasonal labour. This survey also found that when farmers do need to access external finance, they tend to have more success applying for personal loans rather than commercial loans. Thus, the line between personal and business spending tends to be more blurred for smaller-scale farmers. For this reason, the scheme's eligibility criteria state that the guaranteed loan must be subscribed for business use. This criterion also aims to improve the formality of small-scale farmers' financial reporting, reducing incentives to under-report revenue in order to set aside money to repay loans that have been subscribed for personal use but in fact were used for business activity. In addition, a criterion has been added to stipulate eligible loan maturity. This factors in typical business cycles in Ukraine and aims to control for excessively long loan maturities that expose the scheme to overly high portfolio risk.

2.5 Pricing

It is important that the guarantee scheme prices its guarantees adequately. This is particularly the case for schemes that cannot count on public subsidies, since fees and interest income on deposits will be the scheme's main sources of revenue.⁸ Pricing is therefore critical for the scheme's financial sustainability. The pricing of guarantees is also expected to have a direct impact on the additionality of the CGS. If the guarantee is priced too low, banks may use guarantees primarily for their good clients, who may in any event be able to obtain loans without the guarantee. If it is priced too high, banks may either not use guarantees or avoid lending to riskier customers entirely, because the additional costs reduce the banks'

⁶ This calculation involved multiplying the average annual yields in Ukraine for wheat (3 tonnes/ha) and sunflower (2.38 t/ha in Poltava) by the minimum producer price of each product during the harvest season (when prices are lowest): namely, USD 120/t for wheat and USD 300/t for sunflower.

⁷ Article 209 of the Tax Code of Ukraine, paragraph 6: "The special taxation regime of activities in agriculture, forestry and fisheries". See <http://zakon0.rada.gov.ua/laws/show/2755-17/page26#n5201> (in Ukrainian).

⁸ It is also expected that the scheme will receive some recovery income, but this is expected to be low, variable and protracted in terms of receipt.

profit expectation per loan, i.e. high guarantee fees can make guaranteed lending unattractive for banks. So the important question is: “what is the ‘right’ price for a guarantee?”

Since many CGS can count on public subsidies, market-based pricing models that fully factor in the underlying credit risk of the guarantee are rare. Appropriate pricing is also rendered problematic by the fact that a scheme’s principal costs are contingent, i.e. they are costs which may or may not be incurred at some point in the future. Although only 21% of guarantee schemes around the world use risk-based fees, most of the best-performing schemes link fees to their underlying risk exposure (Beck et al., 2008).

2.5.1 Initial determinant of pricing

The project’s feasibility study proposed that the scheme initially charges both an upfront and an annual flat fee. The upfront fee would be a share of the loan amount; this is proposed at a rate of 1%, but can be adjusted to reflect variable transaction costs.⁹ The annual fee (which would be a share of the guaranteed amount) requires further refinement, but should ensure sufficient income for the scheme whilst maintaining its attractiveness for partner banks. An initial calculation (Figure 6) suggests that an annual fee of 3.35% would ensure sustainability. However, this seems far too high to be attractive to banks, given the high and volatile interest rates in the country. Therefore a flat fee of 2%, which is at the top end of what tends to be charged globally, could be applied in the first year or two of the scheme’s operation to ensure the CGS is attractive to partner banks, while also ensuring sustainability.

Figure 6. Supply-side pricing model for annual guarantee fee

Covered loan amount	75,000
With counter guarantee	Yes
Cost of counter guarantee	0.5%
Refinancing rate	0%
Cost of equity	0.5%
Ops cost	0.25%
Underlying credit risk	low
Credit risk cost	0.015
Ops risk ranking	very low
Ops risk premium	0.1%
Profit margin	0.5%
Calculated guarantee fee rate	3.35%

Underlying credit risk	PD%	Ops risk	Premium
very low	1%	very low	0.1%
low	3%	low	0.5%
medium	5%	medium	1.0%
high	7%	high	2.0%
very high	10%	very high	5.0%

Note: Ops means operational; PD means probability of default (see page 29)

⁹ This could be higher for smaller firms, reflecting higher transaction costs. However, it is proposed to maintain the upfront fee at a low flat rate.

Risk exposure calculation	
Probability of default	3%
<u>Loss given default</u>	<u>37,500</u>
Expected loss	1,125

It is recommended that until a more sophisticated pricing model is developed, the type of calculation shown in Figure 6 should be conducted from time to time in order to cross-check the correctness of the CGS pricing policy. This model is basically a cost-up calculation (i.e. a pricing calculation based on costs) and ensures that the CGS management is aware of the minimum fees that must be charged for each guarantee if the scheme is to achieve the required level of profitability.

2.5.2 Improving the pricing model

Once the scheme has been operating for a year or two, a more sophisticated pricing model can be developed to determine the cost of guarantees. The pricing model should factor in risk and transaction costs for different types of enterprise, but to avoid confusion it should not set too many different rates. The determinants of pricing differ across the OECD, but usually at least involve a calculation of the market rate given the costs and expected loss (i.e. risk) of the guarantee (Box 2). According to theory, upfront fees should generally be higher for smaller enterprises due to the higher transaction costs involved, and annual fees should be higher for riskier types of enterprise. In reality, however, smaller and riskier enterprises can often be eligible for fee subsidies in public schemes if increasing credit to such enterprises is regarded as a priority for the scheme.

Box 2. How selected OECD countries calculate guarantee fees

Most schemes in OECD countries calculate the market rate for a guarantee, ensuring that it is greater than the scheme's costs, including the cost of risk. Many public schemes also provide full or partial subsidies to specific SMEs to help them pay guarantee fees. The rationale is that the cost of fees, on top of the interest rate, may disincentivise SMEs from using guarantees and thus limit the reach of the guarantee scheme. A survey of 30 schemes conducted by European Association of Guarantee Institutions (AECM, 2012) found that 40% of schemes provide a subsidy for specific groups of SMEs. For instance:

- In Hungary, the Rural Credit Guarantee Foundation (AVHGA) sets its fee by calculating the market rate and then offering a fee subsidy for the majority of its guarantees (provided by the state). This state aid element is provided principally for agricultural production (55% of contributions), followed by rural activities and the processing and marketing of agricultural products (31% of contributions). Only 2% of guaranteed firms do not receive a fee subsidy. The subsidy is set upon the decision of the guarantee institution. AVHGA ensures that its market fee is higher or equal to the cost of risk, the cost of administration and the cost of capital. Its fee is set based on the calculation of defaults (10-years average in %) minus recoveries (10-years average in %), added to administration costs plus depreciation (10-years average in %), added to a risk premium 8% multiplied by 4% = 0.32%, fixed). The former three data points are gathered from accounting documents; the source of the latter data point is the scheme's guarantee notice.
- In Lithuania, guarantee fees are calculated while factoring in the purpose of credit, guarantee coverage, the risk rating group, the duration of credit, the credit amount, the presence of insurance, credit history, and the presence of subsidies or any special programmes.

Source: Toth, L. (2014) "How to support SMEs with credit guarantees? The case of the Hungarian Rural Credit Guarantee Foundation"; Garfondas presentation (OECD seminar in Kyiv, February 2016)

As a starting point, the following pricing options can be proposed for Ukraine.

Option 1: Pricing based on the net present value of guarantees

One option is to develop a pricing model based on the net present value of guarantees. This calculation would be based strongly on assumptions which are extremely difficult to make for a CGS – such as the probability of default or time taken to liquidate collateral – particularly in Ukraine where the financial sector is both less developed and more volatile than in many OECD countries. Nevertheless, if credit guarantees are being used by CGS partner banks to mitigate individual loan risk, the price of a guarantee should be linked, to the extent possible, to underlying risk exposure. A good starting point to calculate an appropriate risk-based price for a guarantee is the loss expectation of the credit-granting bank for a specific loan.

A bank will normally calculate its expected loss for an individual loan by multiplying three factors: probability of default; exposure at default; and loss given default:

$$\begin{matrix} \textit{Expected Loss} & = & \textit{Probability of Default} & * & \textit{Exposure at Default} & * & \textit{Loss Given Default} \\ \textit{(EL)} & = & \textit{(PD)} & * & \textit{(EAD)} & * & \textit{(LGD)} \end{matrix}$$

For instance, as represented in Figure 7, the expected loss for an outstanding loan exposure of EUR 75 000 is EUR 3 000 if the probability of default is 5% and it is assumed that only 20% of the loan exposure can be recovered following a default, i.e. if the loss given default is 80%.

Figure 7. Calculating expected loss from a loan exposure

Probability of default	PD	%	0.05
Exposure at default	EAD	vol.	75,000.00
Loss given default	LGD	%	0.80
Expected Loss (EL = PD x EAD x LGD)	EL	vol.	3,000.00

Taking a number of key loan determinants into account, such as collateral coverage, interest margin (intermediation spread) and guarantee coverage, one can easily compare the expected profit or loss the crediting bank makes when issuing a specific loan (a) *with* and (b) *without* guarantee. The following example compares the relevant calculations for the two scenarios with 50% collateral coverage, 4% intermediation spread and 50% guarantee coverage, leading to a maximum guarantee fee of 2.5% on the loan principal that can be charged by the CGS. In this example, any higher guarantee fee would not be feasible as the expected profit on this particular loan would then be higher for the bank without the guarantee. This model assumes that a bank will seek a guarantee under two scenarios:

1. If the bank expects to make losses without using a guarantee and to profit with a guarantee (explored in Figure 8);
2. If expected profits for the bank are higher with a guarantee than without a guarantee.

Figure 8. Calculating expected losses of a loan with and without guarantee

(a) Situation without guarantee

Collateral coverage ratio	v	%	0.50	($0 \leq v \leq 1$)
Loan	L	vol.	75,000.00	
Net value of collateral ($V = v \times L$)	V	vol.	37,500.00	($0 \leq v \leq L$)
Expected loss of loan (without guarantee) ($EL_{wo} = PD \times (L - V)$)	ELwo	vol.	1,875.00	
Interest rate on loan	r	%	0.20	
Cost of funds	i	%	0.10	
Intermediation spread (= $r - i$)		%	0.10	
Expected income on loan (= $(r - i) \times L$)		vol.	7,500.00	
Expected profit on loan (without guarantee) ($EP_{wo} = (r - i) \times L - PD \times (L - V)$)	EPwo	vol.	5,625.00	

(b) Situation with guarantee available

Coverage ratio	c	%	0.50
Price (on principle)	p	%	0.0250
Expected loss of loan (with guarantee) ($EL_w = PD \times (L \times (1 - c) - V)$)	ELw	vol.	0.00
Expected profit of loan (with guarantee) ($EP_w = (r - i - p) \times L - PD \times L(1 - c - v)$)	EPw	vol.	5,625.00

Mathematically, the two preconditions for demanding a guarantee by a bank can be expressed as follows:

Figure 9. Preconditions for demanding a guarantee by a bank

	(r-i-p)	PD x (1-v-c)	Delta	
$(r-i-p) \geq PD \times (1-v-c)$	0.0750	0.0000	0.0750	if $\Delta \geq 0 \Rightarrow$ guaranteed loan is profitable
	PD	p/c	Delta	
$PD > p/c$	0.0500	0.0500	0.0000	if $\Delta \geq 0 \Rightarrow$ profit with guarantee > no guarantee

} if both conditions fulfilled, bank will opt for use of guarantee

Option 2: Insurance industry methods

In economic terms, the fee for a credit guarantee is equivalent to the premium chargeable for insuring the bank against the decline of the value of a specific loan. Thus, complex calculation methods used in the insurance industry could be used to determine guarantee fees.

Option 3: Options pricing model

Conceptually, a *put option* is the same as a credit guarantee, because a guarantee gives the bank the right to receive the value of the loan (or a certain portion of it) if the borrower defaults. Therefore, sophisticated models to calculate the price of a put option (e.g. Black-Scholes¹⁰) can in theory calculate the cost of a guarantee.

Option 4: Credit default swap methods

Another way to benchmark the cost of a credit guarantee is to depict the terms and conditions of a guarantee as a financial derivative, such as a credit default swap (CDS), for which a liquid market often exists. The market-based CDS fee can be used as an indicator of the value of the guarantee. Economically, the seller of a CDS insures or guarantees the buyer of the credit derivative to compensate him/her for the face value of the loan in the event of a default.

Option 5: Interest rate-based methods

Another (more practical) way of establishing the range of generally acceptable prices for loan guarantees is to compare the interest rates applied by commercial banks for loans to a specific client *with* and *without* a third party guarantee. The resulting interest spread is the maximum fee that a CGS could theoretically charge for a guarantee as such a guarantee price would give the entire (calculated) financial benefit of the guarantee to the guarantor. In practice, however, a reasonable pricing for a guarantee would be lower as a partner bank would expect that the benefits of the credit guarantee would be divided between the CGS and the bank.

Summary

The last four options determine the cost of a guarantee by comparing the guarantee with other financial instruments for which price calculation tools can be applied or for which there is a liquid market that allows for a rapid determination of the current price quotation for the product. Naturally, when applying these comparative methods it is imperative to ensure that the conditions of the respective instrument are the same as for the guarantee and that the markets for these instruments are sufficiently developed and well-functioning (i.e., competitive and free of distortions) to ensure they offer a reasonable basis for pricing comparisons.

In less mature financial markets like Ukraine's, it may be very challenging to apply any of the above methods in practice, particularly during the scheme's set-up phase before a reliable history of guarantee performance has been accumulated. The immaturity of other financial markets also represents an important constraint on some of the pricing methods. Thus, it is recommended that whilst it builds up its knowledge base, the credit guarantee scheme should initially price its guarantees as a flat fee based on calculations of the scheme's financial model and the respective sensitivity analysis. Afterwards fees should at the very least factor-in credit risk.

¹⁰ Black-Scholes is a mathematical model of a financial market containing derivative investment instruments. It is used to model the price variation over time of financial instruments such as stocks in order to, for instance, determine the theoretical price of European call or put options.

2.6 Collateral coverage

One of the principal rationales for the provision of guarantees is that they can serve as collateral substitutes. However, banks often continue to require the borrower to put up some degree of collateral in order to reduce both adverse selection and moral hazard. This is the case in Central, Eastern and South-Eastern Europe (CESEE), where 92.5% of all partner banks responding to a survey stated that they continued to ask for collateral even with the provision of a loan guarantee (EBCI, 2014). Commercial banks in Ukraine have also indicated that they will insist on this condition if they apply to participate in a credit guarantee scheme. As a result, the design of this scheme assumes the borrower will need to provide some form of collateral for the bank.

Given Ukraine's high-risk lending environment it is unlikely that Ukrainian banks will lower their collateral requirements below 100% of the loan amount; they are likely to require a loan-to-value ratio of 125-150%. However, some banks have suggested that over time they would most likely lower their collateral requirements in co-operation with the CGS. In the short term however, the provision of guarantees may result in only a slight reduction of required collateral (estimated at 20-30%)

Whilst this may result in slower-than-hoped-for additionality from the scheme, it will also mean higher profitability for the scheme in its early stages of operation. A sensitivity analysis included in the scheme's financial model assessed the impact on the scheme's profitability, and thus its sustainability, of reducing collateral requirements (and thus recovery income) for the borrower over a five-year horizon (Table 8).

Table 8. Sensitivity analysis of collateral requirements (EUR)¹¹

Collateral	2016	2017	2018	2019	2020	Total
50%	-11 550	-67 208	-128 455	-197 873	-283 947	-689 033
75%	-5 775	-33 468	-60 327	-98 936	-141 974	-340 480
Base						-
125%	5 775	27 667	60 327	98 936	141 974	334 679
150%	11 550	55 334	120 654	197 873	283 947	669 358

Once launched, the scheme's managers should regularly review the effect of the CGS on its partner banks' collateral requirements, and encourage them to aim for a high level of additionality by reducing collateral requirements for each client eligible for the CGS to the maximum extent possible.

¹¹ This table shows an estimation of the amount (in EUR) that the scheme will gain or lose should the borrower's collateral requirements (as a share of the loan value) be increased or decreased (transferred to the scheme in the form of recovery income – i.e. proceeds from the sale of collateral).

3. SECONDARY CHARACTERISTICS: FUNDING AND REGISTRATION

3.1 Provider of finance

The pre-feasibility and feasibility phases of the project recommended that the scheme should be a public-private legal entity seeded with donor funds. This corresponds to the project's mission statement, which states that the scheme should be independent (of government control) and under the regulation of the National Bank of Ukraine (or similar regulatory body). Given these requirements, as well as the limited public funds and private actors interested in funding the scheme, the only likely funding source in Ukraine, at least initially, is bilateral or multilateral donors.

Funding institutions will need:

- Extensive expertise in financial sector development, ideally through banking sector and non-bank lending support projects
- Proven expertise in Ukraine (or neighbouring countries in the region) and/or in facilitating rural lending
- Strong interest in Ukraine and the country's economic and financial stabilisation (ideally with a project portfolio already present in the country)
- Access to financial and technical assistance (TA) funds (including availability of funding, adequate procedures for project identification and suitable due-diligence requirements for funding approval).

Using these criteria, the project's feasibility study identified a set of "Category A" and "Category B" donors that could be approached for funding. Ukrainian Government officials at least at deputy minister level are recommended to lead the fundraising effort.

3.2 Type of finance and amount

The financial analysis conducted as part of the feasibility study, supplemented by further interviews with donors and supporters, shows that approximately EUR 10 million in seed capital and EUR 1.5 million in technical assistance funds will be needed to successfully launch the fund. In other words, the proposed CGS will require funding of approximately EUR 11.5 million over five years to operate in accordance with its plans. This funding should be provided as a lump-sum grant, since this will assure partner banks and regulators of the scheme's capital adequacy and will weaken the risk of asset/liability mismatches. The return for donors would be the additional impact of the scheme (in its most basic form, the increased number of agricultural SMEs receiving credit which would not have previously) and dividend payments made possible after three years of operation.

3.3 Location of funds

If the scheme is funded by international donors, this raises questions about where the fund should be located. This could also be a foreign exchange rate issue – since it is expected that the functional currency of the CGS will be different to the functional currency of the scheme's investor.¹² This will ultimately be at the discretion of the scheme's founding investors and the Ukrainian government, but below we explore the

¹² As the scheme's founding investor is likely to be an international donor, whereas SMEs in Ukraine (unless they export) are only legally permitted to receive bank loans denominated in hryvnia.

implications of the two principal options. There are two important requirements: the scheme must ensure that it has easy access to its funds in order to service its guarantee obligations, and it must ensure that the registration choice allows the scheme to maximise the value of its funds (and thus to reach more beneficiaries).

3.3.1 Basing the CGS in Ukraine

The first option is that the scheme's funds could be denominated in hryvnia and registered in Ukraine. This would mean that the scheme's founding investors accept the foreign currency investment risk inherent in any foreign investment in Ukraine by converting their functional currency (euros, dollars or other) into hryvnia at the time of the investment.

Advantages: transaction costs of paying guarantee claims are likely to be lower, since the scheme's partner banks are likely to be Ukrainian banks or Ukrainian subsidiaries of international banks. As loans are likely to be denominated in hryvnia, the CGS would pay claims in hryvnia. Holding its fund in the same currency would avoid the need to exchange and transfer funds each time a claim is made. In addition, the NBU is prone to imposing currency controls, as has done so several times in response to the recent crisis in Ukraine. Finally, registering the scheme's funds locally is likely to be simpler and cheaper than registering them abroad; and the scheme is likely to have greater legal access in order to do so.

Disadvantages: the real value of the scheme's funds may deteriorate rapidly after conversion into hryvnia. In addition, donors may be concerned about the risk of misappropriation once the funds are deposited in Ukraine, and restrictions on cross-border payments of dividends to foreign investors may be introduced. In addition, the entity may face restrictions on the investment of funds, with the sale of 75% of foreign currency proceeds received from abroad by legal entities (except banks) currently mandatory.

3.3.2 Basing the CGS in other jurisdictions

The second option would be to denominate the scheme's funds in foreign currency, most likely the functional currency of its founding investor, and register it in a foreign jurisdiction.

Advantages: this would allow the CGS to place its funds in a more mature and stable environment. Thus, the scheme's founding investor(s) could maintain invested funds in their functional currency, shielding themselves and the scheme from potential losses from local currency devaluation and other types of foreign exchange risk. Moreover, keeping funds outside Ukraine may shield the donors from overly lax or overly strict regulatory controls, high taxation, and/or other rules and directives that may create obstacles for the scheme's creation and further development.

Disadvantages: the CGS would be significantly exposed to exchange rate fluctuations and would therefore need to closely monitor and manage its foreign currency exposure in order to protect its investors against unnecessary currency losses. In addition, as mentioned previously, the transaction costs of this model are likely to be high, typically requiring a high guarantee portfolio and significant technical assistance funds. There may also be significant legal costs involved in selecting the most suitable jurisdiction and legal form for the funds.

In this context, it is important to discuss the options carefully with the donors. Box 3 outlines experiences of schemes registered in a foreign jurisdiction; these highlight the importance of considering the broader economic and financial environment.

Box 3. Lessons from establishing CGSs in foreign jurisdictions

A number of examples can be found of CGS established in foreign jurisdictions:

1. The Afghan Credit Guarantee Foundation (ACGF)

- The ACGF was registered in Germany in September 2014 as an incorporated foundation under German civil law (§ 2 StiftG NRW).
- Registering the CGS as a foundation in Germany meant that the inherent risk of the scheme could be transferred and that it could be strongly protected from third parties. However, registration and operation of the ACGF as a German foundation turned out to be a complex and very bureaucratic undertaking, with high legal and other transaction costs.

2. The European Palestinian Credit Guarantee Fund (EPCGF)

- The EPCGF is registered as a so-called “*Stichting*” in the Netherlands. A *Stichting* is a Dutch foundation and a legal entity with limited liability as defined in the Dutch Civil Code (Burgerlijk Wetboek, Boek 2 Art 285-304). This type of entity has no members or share capital that exist for a specific purpose.
- The benefits and costs of this model are similar to those of the ACGF – lacking legal owners, the scheme’s assets can be protected from misappropriation. However the legal and other transaction costs involved are high.

3. The African Guarantee Fund (AGF)

- The AGF was launched in 2012, and is owned by the Government of Denmark, the Government of Spain and the African Development Bank. It is incorporated in the Republic of Mauritius as a private limited liability company, in accordance with the Companies Act 2001 of Mauritius. It had its first continental office in Nairobi, where the CEO and staff are based.

3.4 Registration of entity

In many OECD countries, credit guarantees are extended by departments of ministries or central banks, or by international financial institutions (IFIs). In the case of the US’s Development Credit Authority (DCA) programme, for instance, they can be extended by bilateral development agencies. These types of scheme normally provide guarantees on a portfolio basis, using the credit rating of the government or IFI to secure partner banks’ trust in guarantee claim payment and automatically guaranteeing all loans that meet basic eligibility criteria. This type of scheme generally has low administration costs and is relatively cheap to implement.

In the case of Ukraine, however, it is proposed that the scheme should be established as a legally separate entity. The reason is that despite the ease of implementation and relatively low administration costs of the approach outlined above, a legally separate entity is better placed to provide individual guarantees, and thus tends to have more visibility and control over the borrowers it is guaranteeing. In addition, a legally separate entity could have a higher demonstration effect for Ukraine, and could develop a more profound understanding of the constraints faced by agricultural SMEs and by banks, as well as of operating as a financial service in the Ukrainian context.

If the scheme is established as a legally separate entity, the first decision will be what legal form it should take. Legally separate credit guarantee schemes are generally established as foundations or limited liability companies (LLCs). Although the benefits of foundations include tax exemption and minimal external oversight,¹³ it is recommended that the scheme is established as an LLC. This allows the founding investors to retain ownership rights over their monies, thereby encouraging them to maintain oversight. It also allows for greater flexibility in terms of moving funds and exchanging currency. Finally, it is the only legal form that the current regulator – the State Commission for Regulation of Financial Services Markets of Ukraine or *Natskomfinposlug* – would accept for a CGS.

Natskomfinposlug is proposed as the regulator of the scheme because under current Ukrainian law guarantees are identified as a financial service¹⁴ and financial services must be regulated by *Natskomfinposlug*.¹⁵ The regulation of credit guarantee schemes is common practice in OECD countries – only a few are unregulated. This is because they must be safe and liquid securities which can be enforced legally by partner banks (Green, 2003). This is necessary both for the stability of the banking sector as a whole (depending on their volume in the financial system); as well as for partner bank confidence and their estimation of guarantee value in capital adequacy calculations (which may have an impact on both the volume of guaranteed loans that banks subscribe as well as their conditions for borrowers).

It is recommended that Ukraine's CGS is registered as a non-bank financial institution (NBFI) with the *Natskomfinposlug*, subject to a full legal review prior to donor investment. Experience in OECD countries shows that schemes that are regulated as financial institutions generally have more credibility amongst commercial banks, which are therefore more likely to participate in them.

It should be noted that the mode of regulation differs across OECD countries. Some CGSs are regulated by the standard national body as a standard financial institution, whilst others are regulated under special laws. However, there is consensus amongst CGS experts that any regulation governing a CGS, including those operating under special legislation, must include the following five components (Castellanos, 1997; Green, 2003):

- 1) Capital adequacy requirements: as a precaution against financial risk¹⁶
- 2) A risk fund: to enhance the credibility of the scheme
- 3) Continuous loan portfolio evaluation: to ensure the scheme has sufficient assets to cover estimated liabilities
- 4) Mandatory accounting standards: to reduce scope for manipulating accounts and facilitate supervision and comparison
- 5) Central debtors reporting system: to facilitate the screening of borrowers.

¹³ E.g. from the local regulatory authority – although this may in fact be detrimental for the scheme.

¹⁴ Article 4, Law of Ukraine on Financial Services and State Regulation of Financial Markets (2002), see www.bu.edu/bucflp/files/2012/01/Law-on-Financial-Services-and-State-Regulation-of-Financial-Services-Markets-Law-No.-2664-III-of-2001.pdf.

¹⁵ Article 21, Law of Ukraine on Financial Services and State Regulation of Financial Markets (2002), see www.bu.edu/bucflp/files/2012/01/Law-on-Financial-Services-and-State-Regulation-of-Financial-Services-Markets-Law-No.-2664-III-of-2001.pdf.

¹⁶ This should generally be higher than partner banks. Castellanos (1997) and Green (2003) propose a range of 10-20% of outstanding guarantees.

3.5 Steps for registration

A number of specific procedures will be required in order to register the scheme as an LLC and an NBFI and start operations (Figure 10). These include registering the scheme as a legal entity in the Ukrainian State Register of Legal Entities, and in *Natskomfinposlug*'s formal register of financial institutions. They also include obtaining a license from *Natskomfinposlug* in order to start operations.

Figure 10. Anticipated steps for scheme registration¹⁷



Source: OECD, 6th Task Force Meeting (Kyiv, February 2016)

In order to receive a license from *Natskomfinposlug*, the CGS entity must fulfil the following requirements:

- 1) An exhaustive list in his/her constituent documents of the financial services that will be provided. This should include a detailed view of how the scheme's activities will meet the requirements of Ukrainian legislation.
- 2) The internal document that regulates the procedure for providing financial services. They should also provide legally-compliant sample contracts with their consumers, which should be approved by the scheme's founding investors.
- 3) Prove the existence of a legally-compliant accounting system.
- 4) Provide evidence of accounting and recording systems (software and special technical equipment) that meet *Natskomfinposlug* requirements.

¹⁷ In this diagram, FSC stands for Financial Services Commission (otherwise known as *Natskomfinposlug*), KYC stands for Know Your Customer, and SRoLE stands for State Register of Legal Enterprises.

- 5) Provide evidence of the formation of their authorised share/capital funds, and ensure that these meet minimum requirements set out by *Natskomfinposlug*.
- 6) Ensure the experience and qualifications of the applicant's compliance director and chief accountant meet professional requirements set by *Natskomfinposlug* in Law no. 1590,¹⁸ dated 13 July 2004. These requirements are fairly standard and include tertiary education, five years of work experience – including two years in a managerial position, the possession of an impeccable business reputation, and having passed a standard examination set by *Natskomfinposlug*.
- 7) Provide information on their situation for providing guarantees – for instance: owned or leased premises, recorded in Ukraine's State Register of Legal Entities; fit-for-purpose computer systems that are able to fulfil *Natskomfinposlug* reporting requirements; and means of communication (for instance telephone, internet, e-mail).

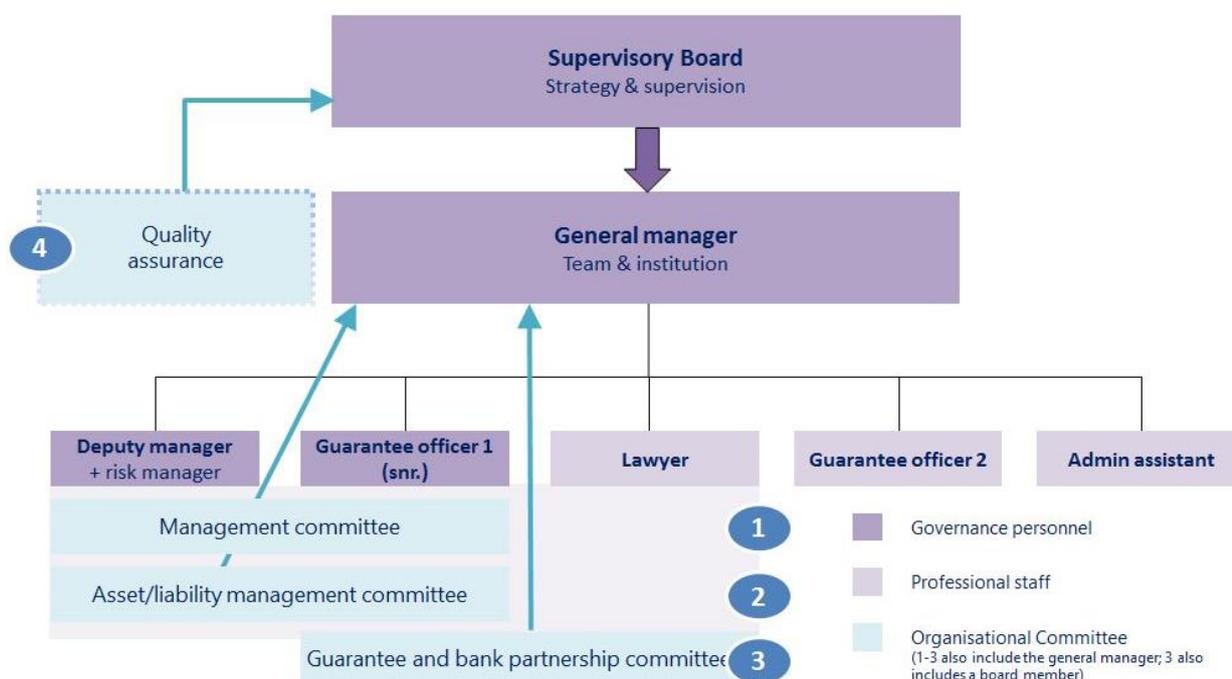
¹⁸ For further details, see: <http://zakon4.rada.gov.ua/laws/show/z0955-04> (in Ukrainian).

4. SECONDARY CHARACTERISTICS: GOVERNANCE AND STAFFING

4.1 Organisational structure

It is proposed that the scheme initially operates as a lean organisation: the number of staff should be as low as possible to keep down fixed costs (see Section 4.3 below). Professional and technically skilled staff members with demonstrated integrity could run day-to-day operations, whilst a supervisory board and general manager would be responsible for setting the scheme’s strategic objectives. The supervisory board would be responsible for strategic policy and advocacy, whilst the general manager would be responsible for business strategy and ensuring that the scheme meets the strategic objectives of the supervisory board. A proposed organigram for the scheme is illustrated in Figure 11.

Figure 11. Recommended organisational structure for the CGS



In keeping the number of staff as low as possible, it will be important that the scheme’s management ensure a good match between functions to be carried out and personnel recruited (Deelen and Molenaar, 2004). To this end, some functions can be combined in one job description. The identification of “operational committees” is also proposed, where key functions of the CGS which require deliberation and decision can be discussed at stipulated intervals by a number of experienced staff members, who are experts on these topics.

4.2 Governance

It is proposed that the scheme has a two-tier governance structure, with a supervisory board setting the broad objectives of the scheme, and a general manager ensuring that the CGS business meets these objectives (Figure 11).

4.2.1. Supervisory board

The scheme's supervisory board ("the board") should perform a strategic and advocacy role. It would support the establishment of the CGS institution, negotiate with regulatory bodies, approve key guarantee policies and procedures (such as decisions concerning the scheme's leverage ratio and coverage rate), have the authority to appoint and dismiss the scheme's general manager, and provide general strategic direction, assistance and guidance as needed.

The board could be comprised of one or two representatives of the scheme's founding investor(s), as well as one or two representatives of the Ukrainian government (ensuring an odd number).¹⁹ An additional independent private sector representative could also be included with professional experience, established reputation and integrity. The board members could be selected based on their expertise in SME lending and agricultural finance and agricultural development, strategic experience, accounting and legal expertise, political expertise, and/or relationship with financiers (Deelen and Molenaar, 2004). Ideally the board members would combine these traits, accompanied by demonstrated integrity and professionalism. Such a board should steer the scheme in line with the aims of the CGS' founding investors (through their representatives), provide best-practice oversight, ensure support from the Government of Ukraine (via its representatives) and maintain the scheme's long-term relevance for Ukraine. However, the board composition would ultimately be at the discretion of the scheme's founding donors.

Once board members have been selected, each member's CV must be submitted to *Natskomfinposlug* in the CGS' business plan as a requirement to receive a business license from *Natskomfinposlug*. The board should meet twice a year to discuss the CGS' operation, provide guidance, help overcome administrative or other barriers, and check that the scheme is still in line with its mission.

4.2.2 General manager

The scheme's everyday business operations should be led and governed by its general manager. It is proposed that s/he would be responsible for ensuring that the business operates in line with the supervisory board's objectives and would lead the scheme's interface with commercial bank partners, donors, investors and government stakeholders. He/she would also ensure that regular monitoring and evaluation is conducted. The general manager should be competitively hired based on technical expertise, leadership and integrity.

4.3 Staffing

The project's pre-feasibility and feasibility studies argue that the proposed scheme should be lean, with the minimum staff necessary to support the supervisory board and the general manager, and run the scheme effectively. This should lower the scheme's fixed costs, which must operate in a risky environment, while, ideally, encouraging staff specialisation and increased efficiency.

In the financial model developed for this project it is envisaged that in year one the scheme will employ six staff members with the following roles:

- **A deputy manager**, responsible for monitoring and correcting the scheme's risk exposures; monitoring and improving the performance of the scheme's portfolio; setting guarantee fees and checking other sources of income; and designing procedures for processing guarantee claims and ensuring banks pursue collateral recovery.

¹⁹ Normally, these would be representatives of at least a couple of the government institutions represented on the project's Task Force: namely; the Ministry of Agrarian Policy and Food, the Ministry of Finance, the Ministry of Economic Development and Trade, and the National Bank of Ukraine. Having an odd number is expected to increase efficiency in voting decisions.

- **A lawyer**, responsible for the legal documentation of guarantee agreements; ensuring that all titling, registration, and legal filings related to any guarantee transaction are properly completed; and monitoring partner banks' collateral repossession procedures and loss-sharing calculations in the event that the guarantee is claimed.
- **Guarantee officers**, responsible for granting guarantees and paying claims; as well as monitoring and evaluating the credit analysis performance and procedures of each partner bank – ensuring that each partner bank has a strong credit assessment process, good lending experience, sufficient capital and assets, and a strong likelihood of making prudent loans that will achieve the objectives of the scheme.
- **An administrative staff member**, who would provide administrative support as needed.

The first three positions (i.e. general manager, deputy manager and lawyer) would not increase during the five years of the scheme's projected timeline, while the number of guarantee officers could increase to ten by year five, and the number of administrative assistants to four by year five (Table 9). Suggested terms of reference and job descriptions are presented in Annex 5. As mentioned in this project's feasibility study, it is envisioned that each guarantee officer will be able to process 200 applications a year.

Table 9. Anticipated employment growth over the projected five-year life time

	Yr1	Yr2	Yr3	Yr4	Yr5
Manager	→ 1				
Deputy manager	→ 1				
Lawyer	→ 1				
Guarantee officers	2	3	5	6	10
Administrative staff	1	2	2	3	4

In addition, it is envisioned that the scheme will contract the services of around two experts for two weeks on a quarterly basis: probably a local independent lawyer and an international CGS expert, who would assess the scheme's activities for quality assurance (see below).

4.3.1 Functional structures: operational committees

It is proposed that in order to assist the smooth operation of the CGS, a number of operational committees are put in place, listed below. These committees would meet at intervals decided by the scheme's manager to consult on and provide recommendations on key operational topics to be fed up to the scheme's supervisory board and general manager. The latter would participate in all committees (except the quality assurance committee). Specific items may also be provided to additional oversight bodies; for instance, the scheme's regulator.

- **Management committee**, to establish how the CGS operates within the policy direction of the board of directors. Specifically, it could address the company's business strategy, investor relationships, CGS funding issues, and the general approach for implementing board policies on all areas, including guarantee monitoring and administration, collections and workouts, and asset liability management. *It could be comprised of the scheme's general manager and deputy general manager, as well as the senior guarantee officer.* It is recommended that the committee has an odd number of members.
- **Guarantee and bank partnership committee**, to approve applications from new partner banks and review applications for guarantees above the internally-set threshold (proposed at

the equivalent of EUR 250 000 of individual loan exposure). The committee could also review problem loans and guarantee pay-out procedures in order to update policies and make modifications as needed. *It could be comprised of the scheme's general manager, a board member (ideally with expertise in the financial sector), senior guarantee officer, and lawyer.*

- **Asset/liability management committee (ALCO)**, to assess the duration and gap between the terms and maturities of CGS guarantee assets and the terms and maturities of liabilities funding these assets. The ALCO could ensure that assets and liabilities are carefully managed so that CGS income and profitability do not become adversely affected by interest rate or foreign exchange movements. *It could be comprised of the scheme's general manager, deputy general manager, and senior guarantee officer.*
- **Quality assurance committee.** As a small and lean organisation, the CGS will not have sufficient revenue to support an internal audit department. However, the board and the Task Force must be provided with sufficient information to make decisions about the organisation's strategy and direction. The board should therefore authorise the formation of a quality assurance committee that would ideally consist of an expatriate CGS expert and a local lawyer. Its task would be to assess the operations and performance of the CGS externally on a quarterly basis before each board meeting. This quality assurance work would involve onsite and offsite monitoring and compliance review, over a two-week period. The findings would be delivered to the supervisory board, which would use them to inform their strategic policy and advocacy decisions and actions.

5. SECONDARY CHARACTERISTICS: GUARANTEE PROCEDURES

It is important to define internal processes as these will ensure the professional operation of the CGS, helping it to achieve additionality and sustainability. The internal CGS processes are diverse in type and form, and include the main processes (e.g. review of loan applications) as well as specific procedures (e.g. calling in the guarantee). A full illustration of the scheme's proposed procedures from application to payout is presented in Figure 12 and described in this section.

5.1 Granting of guarantees

5.1.1 Application

An *ex-post* application process is recommended, in which the scheme's partner bank applies for a guarantee after receiving a loan application from an eligible borrower.²⁰ *Ex-post* application is recommended because it tends to reduce the risk of moral hazard on the part of the borrower. It is also coherent given that the CGS is envisaged as a lean organisation with a strong relationship and clear division of labour with its partner bank. It therefore makes sense that the bank would apply for a guarantee, since they would conduct the main appraisal.

5.1.2 Appraisal

Once the CGS receives a guarantee application, it is recommended that the scheme's guarantee officers conduct a summary check of the borrower's compliance with the scheme's eligibility criteria and a summary check of the borrower's financials (for a full description of these assessments, see Section 2.2.1 of this report). Afterwards, the compiled details of the performance of the partner bank will be checked to ensure that it conducts appropriate risk management procedures. If the borrower fulfils these criteria, and it is confirmed that the partner bank conducts appropriate risk management procedures, the guarantee will be approved. The total application process should take a maximum of two to three days.

Guarantee upper limit

It is recommended that an upper limit on loan size is established, beyond which a client's file will require special approval in order to receive a guarantee. This upper limit should either be the equivalent of EUR 250 000 of exposure, or could be set as a maximum of 1-2% of the amount of capital of the CGS. This will lower the scheme's exposure to individual clients, enable capital to be used in such a way that it maximises outreach, and protect both the CGS and the bank from the potential for abuse or carelessness during the bank's risk assessment process.

5.2 Payment of claims

5.2.1 Claim trigger

However sophisticated the risk assessment process, some borrowers will default on their loan repayment. If appropriate systems are in place, defaults are normally expected to be below 5% of the total portfolio.²¹ In the event of default, the crediting bank is permitted to claim the value of their guarantee from the CGS. Here, the terms of the contract between the bank and the CGS will be very important in

²⁰ This contrasts with an *ex ante* application, whereby the borrower applies to the scheme for a guarantee prior to requesting a loan.

²¹ Based on analytical work conducted by Levitsky (1997).

determining when this can occur and on what terms. The CGS should take care to ensure that the right incentives are in place to encourage the bank to negotiate with the borrower (for example to re-negotiate the borrower's instalments) first, before calling in the guarantee. This is important given the poor environment for enforcing contracts in Ukraine. As highlighted in this project's pre-feasibility study, Ukraine's capacity for enforcing contracts is weak – it ranks 98 out of 189 economies in the World Bank's Doing Business Index, relative to an average of 68 for OECD high-income countries.

Thus, it is proposed that the CGS should be informed by its partner bank as soon as a client becomes delinquent in his or her repayments, and that this should be the trigger event for payment of the guarantee. Payment of the claim should begin a fixed number of days afterwards, contingent on verifiable collection efforts by the bank. This is comparable with CGSs in other underdeveloped financial and judicial environments, such as the Middle East and North Africa region, where a great number of guarantee schemes have rules that allow payment of claims before legal procedures have been exhausted (World Bank, 2010).²² It is also recommended that the creditor bank should attempt other methods to resolve the issue before starting foreclosure. These terms should be clearly stated in the contract between the bank and the CGS, to ensure that each party is aware of – and is legally obligated to uphold – its responsibilities in the event of default. The contract should be drawn-up with expert legal specialists and should be reviewed by both the participant bank and the CGS involved prior to finalisation to ensure that it is agreeable to both parties. An example of clauses to be included in such a contract can be found in Annex 6.

5.2.2. Pay-out

Careful consideration of incentive structures is also important for guarantee pay-out. Payment rules must define when, under what conditions, and how guarantee claims are paid, and they should be clear and predictable to ensure credibility.

As described above, it is recommended that payment of the guarantee is not contingent on foreclosure. This is because the attractiveness of guarantees can be influenced by the efficacy of a particular country's judicial systems. CGSs in countries with efficient judicial systems – as is the case for instance in France, Canada, and the US – tend to pay guarantee claims on the basis of realised losses and when all judicial procedures are exhausted (Saadani et al, 2010). In countries with less efficient judicial systems, however, this may be too long and costly to be attractive to partner banks (World Bank, 2010). The weaknesses of Ukraine's contract enforcement capacity and its judicial system in resolving insolvency (Table 11) may jeopardise the guarantee claim process and undermine the attractiveness of the scheme to banks. In terms of the lapse between trigger event²³ and payment of the guarantee, it varies quite considerably, but the most common duration is three months or 90 days (Graham Bannock and Partners, 1997).

While these payment rules are more attractive to banks operating in weak judicial environments, they can also encourage moral hazard. A bank that is certain of prompt payment of the guarantee has little incentive to attempt renegotiation with a defaulting client, and little incentive to conduct the full set of legal proceedings leading to collateral recovery.²⁴ CGSs operating in such environments are currently experimenting with different ways to retain the attractiveness of guarantees whilst encouraging banks to conduct thorough procedures for enforcing collection. In Syria, for instance, the claim payment is deposited in an escrow account at the bank until legal procedures are exhausted. In Lebanon and the United Arab Emirates, the guarantor is principally responsible for recovering collateral (World Bank, 2010).

²² In fact all of the nine countries cited: Iraq, Jordan, Lebanon, Morocco, Palestine, Saudi Arabia, Syria, Tunisia and UAE.

²³ The trigger event is the event agreed between the guarantor and guaranteed that triggers payment of the guarantee –for instance a missed payment or a defaulted loan.

²⁴ This argument is also one of the principle justifications for a low guarantee coverage rate.

However, one of the most common approaches to address this challenge is to offer a staggered payment of the guarantee. This is the case in Tunisia and Morocco, for instance, and is envisaged for Ukraine. This approach bundles repayment into several instalments, which are fixed shares of the total guaranteed amount. Theoretically, this approach will be attractive to partner banks. It offers them payment promptly, whilst encouraging them to examine all means of enforcing collection by holding some of the payment back.²⁵ The efficacy of this approach has not been sufficiently tested yet, but is a popular approach for addressing two competing objectives of guarantee payment and seems advisable for Ukraine.

The final important question is the number of days between trigger event (i.e. a missed payment) and guarantee pay-out. It is proposed that the CGS should pay 50% of the outstanding loan amount 61-90 days²⁶ after the trigger event, so long as the bank has conducted credible collection efforts. The remaining principal should be paid in full after a lapse of 180 days, contingent on the same criteria (Table 10).

Table 10. Guarantee restitution table

No. of days	1-30	31-60	61-90	90-180
Payment of guarantee principal to bank	0%	0%	50%	50%

This restitution structure is based on an estimation of the impact of overdue loans on loan loss provisioning requirements in the event that the loan is guaranteed versus not guaranteed. Loan loss provisioning requirements are not significantly affected in the initial arrears phase (in the first 2-3 months afterwards, or up to 90 days of a loan becoming overdue). However after 2-3 months, these requirements (i.e. expenses for the bank) significantly increase. Therefore, it is likely that partner banks will only be interested in a scheme that can deposit the guarantee with the bank around 90-180 days after loan repayments fall overdue. This is more favourable than the two cited examples in the MENA region, Morocco and Tunisia, which provide the remaining principal after legal proceedings have been exhausted. This is on account of the particularly slow judicial procedures in Ukraine and the novelty of the scheme, but could be adjusted as the scheme matures and the environment improves.

5.2.3. Collateral recovery

It is recommended that the CGS delegates to its partner bank the responsibility for collateral recovery, and that all recovery income is shared *pari passu*, having equal rights. Resolving insolvency is a complicated and arduous process in Ukraine, and it would be too costly for the scheme to pursue recovery alongside or *in lieu* of partner banks (Table 11).

Table 11. Resolving insolvency in Ukraine is slow and costly

Country	Average rate (cents on the dollar)	Average time (years)
Ukraine	8.3	2.9
OECD high-income	72.3	1.7
<i>Regional peers</i>		
Belarus	37.6	3

²⁵ This approach would also allow room for the borrower to be given some additional time to repay the owed amounts.

²⁶ The exact number should be defined by the scheme's management and partner banks whilst negotiating the guarantee contract.

Poland	58.3	3
Russia	41.7	2

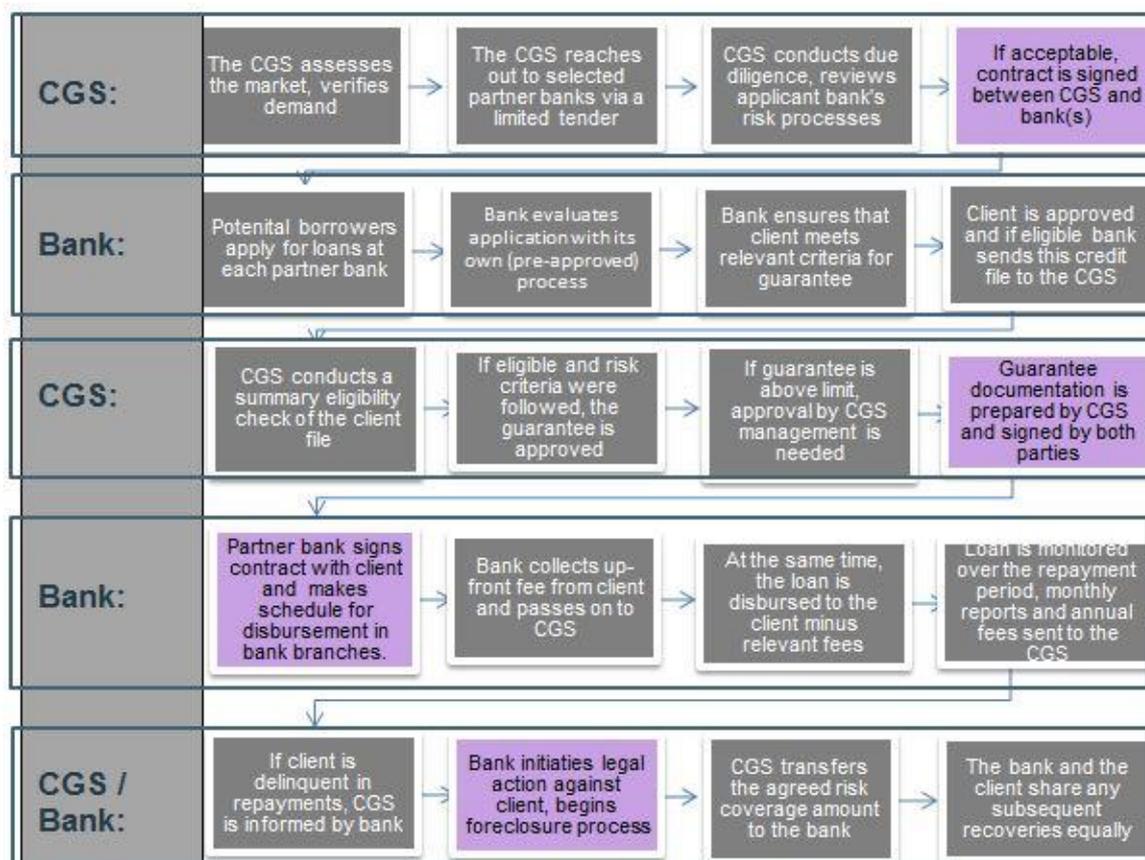
Source: World Bank (2015), *Doing Business 2015: Going beyond efficiency*.

Based on lending experience in Ukraine, it is estimated that the recovery income received by the scheme will be 20% of the total volume of guarantee payments made. This is a conservative rate given the adverse conditions demonstrated in the World Bank indicators above. Nevertheless, information on the steps taken in this process should be provided by the bank to the CGS, and their performance here recorded for pricing and contract renegotiation purposes.

5.3 Summary of guarantee procedures

The summary of internal processes for granting and issuing a guarantee, with a delineation of activities to be conducted by banks and activities to be conducted by the CGS, is presented in Figure 12.

Figure 12. Internal processes for reviewing and issuing guarantee applications



Note: purple shading indicates preparation and signature of formal legal documents

Source: IPC analysis

6. MONITORING AND EVALUATION

Effective monitoring and evaluation are critical to good policy and should be designed *ex ante*, as policies are taking shape, rather than being addressed *ex post*, as is often the case. Even the most well-designed policies may fail, but having effective monitoring and evaluation mechanisms in place can either prevent such failure or mitigate its impact. They can also help avoid failure by allowing for feedback and adjustment during implementation.

6.1 Additionality, sustainability and policy levers

6.1.1 CGS goals: *additionality and sustainability*

As outlined in this project's pre-feasibility study, the two main goals of a CGS are to achieve additionality and sustainability, in line with the scheme's mission statement. Additionality is defined in two parts:

- 1) Financial additionality: the increase in loan volume (and often loan conditions) for targeted SMEs as a result of the scheme.
- 2) Economic additionality: the effect of increased access to finance on overall economic welfare. This is generally taken to include increased sales, employment, investment or innovation of supported SMEs; or, at the macro level, increased competitiveness and growth.

Sustainability is the ability of the CGS to cover its costs whilst increasing leverage towards its target group. A credit guarantee scheme should achieve both these goals simultaneously in order to be considered successful. A scheme that achieves neither, or one without the other, risks market distortions, significant losses for partner banks, and the end of the scheme (too unsustainable) or significant opportunity cost for funds that could be used elsewhere (too little additionality).²⁷

6.1.2 Policy levers for *adjusting both sustainability and additionality*

There are two policy levers that can be used to increase sustainability and decrease additionality or vice versa. These include the scheme's leverage ratio and coverage rates provided to the scheme's clients. The scheme's coverage rate broadly fixes its risk exposure to each individual client, whilst the scheme's leverage ratio fixes its risk exposure to losses in its overall portfolio and its fixed costs.

Leverage ratio

A credit guarantee scheme's leverage ratio is the size of the scheme's guarantee portfolio relative to the size of its fund. This multiplier effect is one of the main arguments for a credit guarantee scheme: it can reach many more clients than other policy instruments through its leverage effect. However, ensuring that the leverage is large enough to warrant the scheme must be balanced carefully against maintaining confidence in the scheme by ensuring that it is sustainable. Levitsky (1997) holds that a leverage rate of five times the size of the fund after five years of operation is acceptable, increasing to a maximum of ten after seven to ten years of operation; dependent on risk appetite and on the proviso that claims are not too high. However, his analysis of sixty-one CGS worldwide (Levitsky, 1997) shows that a scheme's leverage rate is heavily influenced by the size and age of the scheme, as well as the stability of the country's banking system, with older, larger schemes (i.e. above EUR 100 million in guarantees) operating in

²⁷ For instance because of a leverage ratio that is too low.

countries with sound banking systems achieving higher leverage. It is also affected by the nature of the scheme's financing – analysis conducted by Graham Bannock and Partners (1997) suggests that the degree of leverage a CGS can achieve may be restricted if there is a shortage of equity in its funding.

Based on these international best practices, various leverage rates were modelled in the financial model. Given the difficult financial environment in Ukraine, the newness of the scheme and the targeting of a risky and single sector, the model calls for a conservative leverage ratio of around 1.5 in the first year, climbing to a factor of 5 by the fifth year.

It is important to note, however, that the leverage factor is completely controllable by the CGS. It determines internally what its target leverage ratio is, and then makes agreements with partner banks to guarantee a specific volume of loans in accordance with this target. As loans are paid off or enter delinquency, the CGS can continually adjust its leverage rate to accommodate a fluid situation, keeping in mind at all times the need to ensure sustainability and to avoid overcommitting and jeopardising the contractual relationship with the partner banks. As such, the leverage ratio will be a function of the goals of the CGS measured against its capital base, its estimates of potential loan losses, and the expectations of the partner banks for the future solvency of the fund based on their expectations of loan losses.

Coverage rate

The share of a loan that is guaranteed by a CGS dictates the degree of liability that a CGS will accept in the event of default – i.e. the coverage rate. This is an important feature because it must be low enough to discourage moral hazard and high enough to be attractive to banks. A coverage that is too high may result in a high number of defaults and threaten the scheme's sustainability; a coverage rate that is too low may fail to generate a sufficient volume of new loans. In order to increase either sustainability or additionality, a CGS can adjust the level of coverage it provides. It can also offer variable coverage rates – increasing or decreasing its coverage rate to a specific group of borrowers as it matures, if a strong case can be made for increasing additionality (in particular – where coverage rates could be increased for particularly credit-constrained SMEs to a maximum rate of 70%) or sustainability.

6.2 Monitoring

In order to monitor the scheme's sustainability and additionality, the scheme must outline its performance indicators from the outset. These indicators should be constantly monitored and subsequently evaluated. This exercise will enable the scheme's management (both its supervisory and management boards) to assess its performance against its targets and to monitor developments over time. Such indicators are an important tool for decision making and corrective action. A proposed set of performance indicators is listed in Tables 12 and 13 (Deelen and Molenaar, 2004).

To this end, and particularly as the scheme achieves scale, it will be necessary to maintain a data warehousing system to store, keep track of and retrieve larger amounts of data. This system should track key indicators suggested above, such as the number and volume of guarantees provided, maturities, client details (i.e. firm name), and claim rates. It should be user-friendly and results should be easily retrievable.

Developing a data warehousing system and incorporating it into the operating system of the CGS would require the following steps:

- 1) **Define the central data requirements.** Data requirements from the central location's point of view need to be precisely defined in business terms.
- 2) **Model database.** Based on the data requirements, the central database is modelled and the same model is also used as a starting point for the institutions' local databases.

- 3) **Map local data sources to central definitions.** This is the most complex step, as it involves analysing the available data at partner bank level and mapping them to the central definitions. At this stage, decisions need to be taken on cleaning and standardising, and in some cases the banks' systems will need to be adapted to provide data that can fulfil the central requirements. However, this would only be necessary in cases where the problem of a logical transformation of locally available data to centrally required data cannot be resolved.
- 4) **Implement and connect local and central applications.** The actual data warehouse framework needs to be deployed both locally and centrally and the communication between the two levels must be set up and tested.
- 5) **Upload local data.** Once the mapping of data has been defined, the CGS partner institutions can start to load the data into their local on-site database.
- 6) **Transfer and merge data.** When data have been loaded at bank level they can then be transferred to the central CGS location and tested there.
- 7) **Design reports.** When data are available in local and central databases, analytical reports can be designed for the final user.

It is anticipated that the cost of developing and installing this system would be under EUR 100 000. This cost is factored into the EUR 1.5 million of technical assistance funds mentioned previously.

6.2.1 Monitoring sustainability

Financial performance indicators

It is recommended that the scheme monitor financial performance indicators to keep track of its sustainability. These indicators, listed in Table 12, will provide a good overview of the efficiency and health of the scheme's portfolio, and can signal where corrective action may be required. Data gathered from these indicators will also be fed into the scheme's financial reports.

Table 12. Suggested financial performance indicators

Indicator	What does it measure?	How is it calculated?
Pay-out rate	Losses incurred	The value of pay-outs over a year, divided by the average outstanding guarantee amount over that year. The pay-out rate is calculated for each lender separately. Good ratios should be below 3% and should never exceed 7% in a fully established guarantee fund.
Net loss rate	Net losses incurred	Pay-outs minus proceeds from recovery over a year, divided by the average outstanding guarantee amount over that year. This ratio is calculated for each lender separately. Good ratios are below 2%.
Recovery rate	The capacity of both lender and guarantee fund to recover losses from borrowers after claims	Proceeds from recoveries, divided by pay-outs. Ratios are calculated for each lender individually. A good ratio should be higher than 20%.

Guarantee portfolio at risk	Portfolio quality	The total amount of guaranteed portfolio overdue, divided by the total outstanding guaranteed portfolio.
Transaction cost per euro of guarantee issued	Operational efficiency	Operating costs over a certain period, divided by the total amount of guarantees issued over that period. Transaction costs can also be expressed as a cost per guarantee issued.
Average number of days taken to issue a guarantee	Operational efficiency	The number of days from the moment the borrower presents him/herself to the guarantee fund, to the moment that the guarantee is issued (this indicator only applies for individual guarantees).
Average number of days to pay out a claim	Operational efficiency	The number of days from the moment the bank sends a claim to the guarantee scheme, to the moment the claim is settled.
Leverage	Effectiveness	The amount of guaranteed loans extended divided by the capital of the guarantee fund.
Number and value of guarantees issued	Effectiveness	These numbers have to be compared with the set targets.

Source: Deelen L. and Molenaar K. (2004) *Guarantee Funds for Small Enterprises: a manual for guarantee fund managers*

These indicators could be tracked in the CGS's data warehousing system. The data would be extracted for reporting and evaluation purposes.

6.2.2 Monitoring additionality

Socioeconomic performance indicators

In addition to the above, it is recommended that the scheme monitors a set of socioeconomic performance indicators to keep track of additionality (Table 13).

Table 13. Suggested socioeconomic performance indicators

Indicator	What does it measure?	How is it calculated?
Growth in the number of guarantees	Financial additionality	The cumulative number of guarantees provided
Growth in the volume of guarantees	Financial additionality	The cumulative volume of guarantees provided
Characteristics of guaranteed firms and loan use	Economic additionality	The financial assessment and benchmarking analysis, conducted when deciding whether to grant a guarantee, could be used to elucidate firm and loan-use dynamics
Characteristics of guaranteed loans granted	Financial additionality	Average guarantee amount per client calculated annually; number of short-, medium- and long-term loans guaranteed annually; average interest rate on guaranteed loans calculated annually

Source: Deelen L. and Molenaar K. (2004) *Guarantee Funds for Small Enterprises: a manual for guarantee fund managers* and author's analysis.

6.3 Evaluation

The scheme's additionality and sustainability should be evaluated, ideally by an external expert, at least annually, and findings should be fed to the scheme's supervisory board and management board for policy responses such as adjusting the fees, leverage ratio, coverage rates or partnerships with commercial banks. The evaluation process would involve compiling and analysing information gathered during the monitoring process, and occasionally could involve the gathering of new material. For example, after five years a study of the scheme's economic additionality could be conducted, ideally by external experts, such as the quality assurance committee described in Chapter 4. Evaluation of sustainability may also be conducted to some extent by the supervisory body regulating the scheme, or by external auditors (who may, for instance, be commissioned by the scheme's donors).

6.3.1 Evaluating sustainability

In order to assess the scheme's sustainability, the various financial performance indicators listed in Table 12 can be collected and assessed alongside international best-practice benchmarks as well as modelled in the scheme's financial statements.

Evaluating the scheme's sustainability should also include an assessment of the anticipated impact of the continuation of current performance on the scheme's financial statements. Relevant documents for this task include the scheme's liquidity forecast, portfolio report, profit and loss statement (also known as income statement), and balance sheet. These reports can model the scheme's anticipated liquidity, portfolio quality, profitability and financial structure based on a continuation of current performance – thus forecasting whether the scheme is likely to achieve its sustainability objectives. It is recommended that the scheme also conducts sensitivity analysis to assess how downward or upward adjustments to various indicators (Table 14) might affect financial performance and sustainability – for instance higher default rates, inflation, or net losses.

Table 14. Proposed factors for and ideal outcomes of sensitivity analysis

Factors for analysis		Min.	Max.	Ideal range
1	New guarantee fee	1%	3%	1-1.5%
2	Outstanding guarantee fee	1%	2%	1-2%
3	Deposit interest	2%	4%	2-3%
4	Coverage ratio	50%	70%	50%
5	Pay-out percentage	1%	3.5%	1-3%
6	Financing cost	0%	3%	1-2%
7	Start-up cost	500K	1M	900K
8	Recovery percentage	10%	50%	20-40%
9	Annual cost increases	1%	5%	1-2%
10	Other (legal) costs	50K	500K	100K
11	Tax rate	18%	20%	18%

Evaluations should ideally be conducted quarterly, but at least annually. The findings should be communicated to the scheme's managerial personnel (its supervisory and management boards), and corrective action taken where necessary. Corrective actions could include slowing or decreasing the scheme's leverage rate; increasing guarantee fees (for instance for a particularly risky segment or borrowers or banks that perform less well than others); decreasing coverage rates; portfolio diversification (for instance through the adjustment of eligibility criteria); or actions to increasing operational efficiency.

6.3.2 Evaluating additionality

In order to assess the scheme's financial additionality, the relevant socioeconomic performance indicators listed in Table 13 (and others decided by the scheme's management, including its founding investors) can be collected and evaluated at regular intervals – for instance annually or biannually. To assess the scheme's economic additionality a less regular assessment is proposed, given the more difficult and costlier data-collection process involved. Even in OECD countries, CGSs rarely assess economic additionality for this reason (though see Box 4). However, such an assessment is useful – particularly for schemes with stronger policy objectives, such as public or international donor-funded schemes – and is becoming more common.

Alongside the indicators suggested above, it is suggested that the scheme's loan officers score guarantees across various indicators of additionality developed based on the identification of particular credit constraints and policy objectives from the scheme's proposed pilot regions (Table 14).²⁸ This can be useful for assessing both the performance of the scheme and of its partner banks.

Based on the scheme's performance against these indicators, the scheme's management can choose to take corrective action – usually to increase the scheme's additionality if this can be achieved without adversely affecting its sustainability. Corrective actions could include increasing the scheme's leverage rate; increasing coverage rates provided (for instance for segments of the target group that are particularly credit constrained); or offering training, technical assistance or advisory services for SMEs or partner banks. The Agrarian Credit Guarantee Fund (ACGF) in Lithuania has emphasised the importance of constant communication between the scheme and partner banks as a key element in its success. This is likely to also be an important element for increasing the scheme's additionality – constant dialogue with partner banks will communicate the objectives of the scheme, and will help in understanding the constraints that banks might face in meeting them.

Table 14. Proposed additionality scoring matrix for the Ukraine CGS

B. Economic additionality		Weight	Min. target score	1	2	3	4	5
1	Size of active ha. (1 cattle=100ha)	15%	3	1,500-2,000	1,000-1,500	400-1,000	200-400	100-200
2	Level of income applied to agro	10%	3	—	—	75-90%	—	90-100%
3	Annual turnover (USD)	15%	3	1,200,001-1,500,000	700,001-1,200,000	250,001-700,000	110,001-250,000	30,000-110,000
4	Collateral coverage (without G.)	5%	3	—	> 100%	50-100%	31-50%	10-30%
5	Level of previous borrowings	10%	3	loan in last 2 years	—	no loan in last 2 years	—	never had loan
6	Loan term and purpose	10%	3	—	w/c	w/c & equip	equipment	investment
7	Age of current equipment	5%	3	< 7 years	—	7-12 years	—	≥ 12 years
Subtotal		70%	2.10					
C. Socioeconomic additionality		Weight	Min. target score	1	2	3	4	5
1	Number of employees	10%	3	—	1-10 empl.	10-20 empl.	> 20 empl.	family farm
2	Location of borrower	15%	3	—	—	KHA/PO	—	CH/VI
3	Local roots	5%	3	—	—	foreign	lives in city	lives on farm
Subtotal		30%	0.90					
Total		100%	3.00					
Level of additionality		Medium		≤ 2 = low	2 to 3.5 = medium	> 3.5 = high		

²⁸ Gathered during a study visit in the first quarter of 2015.

Box 4. Evaluating economic additionality of CGSs in OECD countries

Although the evaluation of economic additionality is relatively rare in OECD countries, Leone and Vento (2012) conducted 12 studies of CGSs in 8 OECD countries that evaluate economic additionality.¹For instance:

- In Korea, 40 000 firms that received guaranteed loans were evaluated between 2000 and 2003. The study used a chained-multilateral index number approach to estimate the total productivity of firms; a probit model to estimate the receipt of guarantees; and estimated the effect of guarantees by using a kernel propensity score matching and observing several aspects of the guaranteed firm's operation relative to changes in firm status and performance. The study provided information on the growth in size, survival rate, R&D and investment, and the general growth in productivity (Oh et al., 2006).
- In Canada, 682 firms that received guarantees were evaluated against an 850 000-firm control group in 1995. The study conducted descriptive analysis based on data collected via a standard telephone survey to determine the impact of the Canadian Small Business Loan Act (SBLA)'s loan on revenues, profits, employment and survival; results were compared with the control group's performance on these indicators (Riding and Haines, 2001).
- In France, 1 362 firms that received guarantees were evaluated against 205 852 firms that did not receive guarantees. The study adopted a differences-in-differences approach to estimate the impact of the scheme on different outcomes: principally, debt (dependent variables); employment and capital growth; as well as financial expenses and bankruptcy probability (Lelarge, Sraer and Thesmar, 2008).

¹For a full list and further details, refer to Leone and Vento (2012).

Sources: Leone, P. and Vento, G.A. (2012) *Credit Guarantee Institutions and SME Finance*, Palgrave Macmillan; Oh, I., Lee, J.D. and Choi, G.G. and Heshmati, A. (2006) *Evaluation of Credit Guarantee Policy Using Propensity Score Matching*; Riding, A.L. and Haines, G. (2001), "Loan guarantees: costs of default and benefits to small firms," *Journal of Business Venturing*, 16 (6): 595-612; Lelarge, C. Sraer, D. and Thesmar, D. (2008), *Entrepreneurship and Credit Constraints Evidence from a French Loan Guarantee Program*, National Bureau of Economic Research.

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ANNEXES

Annex 1: Financial Model – separate file

Annex 2: Risk Policy Manual – separate file

Annex 3: Terms of Reference Accounting, Tax and Compliance Tool – separate file

Annex 4: Sample Asset/ Liability Mismatch (ALM) Tool – separate file

Annex 5: CGS Job Descriptions – separate file

Annex 6: Sample Individual Guarantee Contract²⁹

The following clauses usually appear in a guarantee contract:

1. Descriptions of the borrower, the loan size, the loan term, the repayment pattern and the interest rate charged on the loan
2. Descriptions of the collateral and personal guarantees pledged by the borrower and other guarantors
3. A description of how much is covered by the guarantee fund. This can be expressed either in monetary terms (an amount fixed or decreasing over the loan period) or as a percentage of some of the loan components (principal, interest, penalty interest). In cases where interest or penalty interest is covered by the guarantee fund, the contract should specify a maximum number of months after the first missed instalment over which the lender can claim interest
4. The duration of the guarantee (usually the same as the loan term)
5. A clause specifying that the guarantee fund is subsidiary liable, its liability being confined to a percentage of the loan losses made after the deduction of proceedings from collateral and from personal guarantors
6. A clause that specifies the fees to be paid by the lender or the client to the guarantee fund, the timing of the payments and the method of payment
7. A clause that specifies that if the guarantee fee has not been paid, the guarantee is invalid
8. A clause that specifies whether or not the guarantee fund will refund fees paid by the lender or the borrower for unexpired periods of coverage in case of termination of the guarantee contract due to claims or due to other reasons
9. A clause that specifies the type of information that the lender has to submit to the guarantee fund on the guaranteed loan, as well as the reporting timeframes
10. A clause that gives the guarantee fund the right to access the loan files of the guaranteed borrower
11. A clause that spells out that the lender is only allowed to restructure or reschedule the loan if there is prior authorisation from the guarantee fund
12. A clause that specifies the conditions under which the lender can call in the claim, for example when all the following have happened:
 - Arrears have reached 90 days
 - Defaulters have been appropriately warned
 - The loan has been called in

²⁹ Source: Deelen and Molenaar (2003).

- Legal proceedings have been initiated to foreclose on collateral and to recover loan debt
13. A clause that limits the time period within which lenders can call in claims, for example the lender has to call in the claim within 40 days after the arrears have reached 90 days and the loan has been called in
 14. A description of the documents that should accompany a claim:
 - Photocopy of the loan document
 - Photocopy of the court writ
 - Photocopy of the payment order(s)
 15. The criteria for rejecting claims, such as:
 - The lender did not pay the fees
 - The lender restructured or rescheduled the loan without authorisation from the guarantee fund
 - The claim was presented beyond the agreed period
 - The loan was disbursed before the guarantee was approved
 16. A clause that specifies the maximum number of days for the settlement or the rejection of the claim by the guarantee fund
 17. A clause that specifies the method of payment for the settlement of claims
 18. A clause that specifies how proceeds from collateral will be divided between the lender and the guarantee fund
 19. A clause that specifies a time period after the recovery of collateral, within which the lender is to transfer the amounts owed to the guarantee fund
 20. A clause that specifies that the guarantee fund, after paying a claim, is entitled as a new creditor to designate its own representative to jointly repossess, with the lender's representative, assets from the client and/or personal guarantors

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